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ABSTRACT

This 15th anniversary collection of student articles offers papers by 10 student authors: "The Sexual Impact of Hysterectomy: Intervention Implications for Health Education" (Kandice Johnson); "Barriers to Physicians Providing Health Education in Primary Care Settings" (Susan E. Kearney); "The School Health Education Study: A Chronology" (Adrian R. Lyde); "Travel Violence: Implications for Health Education" (Jessica C. Novak); "Arthritis Foundation Aquatic Leader Community Service Project" (Tammy Oberdieck and Missy Jordan); "Hepatitis A: An Emerging Public Health Concern" (Lisa N. Pealer); "Social Isolation Among Persons with HIV and AIDS" (Robin Petersen); "Employment in the Nonprofit Sector: A Primer for Health Educators" (Susan S. Thomas); "Humor as a Stress Management Strategy" (Tricia R. Weber); and "Ecstasy and Raves: Implications for Health Education" (Jennifer Lee Wiley). (All papers contain references.) (SM)

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Volume 16, Number 1
1998

The Health Education Monograph

Series

THE STUDENT ISSUE

ORIGINAL ARTICLES BY STUDENT GAMMANS 1998 EDITION

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Foreword

Student Gammans as Authors: A 15 Year Retrospective

Since 1984, *The Student Issue of The Health Education Monograph Series* (known from 1984-1995 as the *Student Monograph*) has encouraged and promoted student scholarship by publishing original papers by student Gammans. This year, Eta Sigma Gamma publishes the 15th anniversary collection of student articles. *The Student Issue* has emerged as a prominent publication for students to exercise their acumen and writing talents. In his editorial commemorating the *Monograph's* tenth edition, Dr. Steve M. Dorman reviewed the accomplishments of the student monograph series. Extending his work, I will use this opportunity to append the record.

Edited by Professor R. Morgan Pigg, Jr., the first *Student Monograph* was published in 1984. It contained seven articles on topics ranging from the need for worksite health promotion to planning health education in health care settings. Each year, the *Monograph Series* editor appoints a Gamman to serve as guest editor. Gammans who served in this capacity can be found on page 48. Including this year, the *Student Issue* has published 126 papers by student Gammans from 25 chapters and their affiliated colleges and universities (see Page 49). Reading the record of past authors, editors, and reviewers is inspiring. The record consists of Gammans who remain truly active in the discipline and in the Honorary. I read names of Gammans who are known for their writing and for mentoring young writers. I read names of Gammans who are exceptional teachers, doing their part to improve the human condition. I also read names of people who are leaders in the profession and have served or are serving the Honorary with distinction. Judging by past participation, performance, and practice, no one can dispute the value of this enterprise. It represents a crowning achievement for the Honorary.

As guest editor, I acknowledge the faculty sponsors and other Gammans who encouraged their students in preparing papers. One veteran reviewer characterized the papers she reviewed as in "great shape." This comment is a testament to your work. Likewise, I thank the reviewers for taking time from their demanding schedules to examine papers. Your collective contribution was indeed significant. I also recognize Professor Mohammad R. Torabi, who patiently guided me through my editorial responsibilities while tolerating my seeming disregard for deadlines. Mohammad, thank you.

In closing, I applaud the authors on their splendid work and superior accomplishment. As the author of a paper that was published in a student issue, I occasionally reminisce about the time, the place, and the people associated with that experience. Despite the "gentle modifications" I was asked to make before the manuscript was accepted, it was a rewarding experience. Yet, as a student I also remember the disappointment when my first paper, submitted the previous year, was not published. Choking down the truth that my writing craved attention, that my topic might not have been suitable, or that there were simply better papers that deserved publishing was hard for me. So, to those students whose papers could not be published this time, keep working. It will happen, and when it does, let me know.

Robert M. Weiler
University of Florida

Preface

On behalf of your National Executive Committee of **Eta Sigma Gamma (ESG)**, I would like to offer my sincere congratulations to all of the students who submitted research papers for publication consideration in this student issue of ***The Health Education Monograph Series***. This is a strong indication of our students' commitment to research. I would like to extend my genuine appreciation to Dr. Robert M. Weiler for the excellent job he has done as our Guest Editor for this issue. Further, I wish to thank all faculty advisors who encouraged and worked with the students in the manuscript preparation. My sincere appreciation and gratitude are extended to Kathy Finley for her assistance in preparing the final publication, and Joyce Arthur for her technical assistance. A special thanks is also extended to Ms. Donna Ganion, Executive Director of **ESG** for her general assistance. Certainly, I must thank the Department of Applied Health Science of Indiana University for the in-kind support provided for the publication of the **Monograph Series**.

I would like to invite all faculty to encourage students to submit research papers for the next student issue of ***The Health Education Monograph Series***. The deadline for submission is January 10, 1999. Our guest editor for the next student issue is Dr. Behjat Sharif at California State University at Los Angeles, 95 Briarglen, Irvine, California 92614. Office number (213)343-4747, fax number (213)343-2670; email: bsharif@calstatela.edu.

Finally, I would like to thank you for sharing your comments with me regarding the past **Monograph Series**. As always, I am eager to hear your critisism, comments, and suggestions relative to this publication. I do hope that you, as loyal members of this National Honorary, check your college/university libraries and make sure that they receive ***The Health Education Monograph Series***. If not, please request that they subscribe to these important publications. It is a privilege for me to serve **ESG** members and our profession.

I look forward to hearing from you.

Mohammad R. Torabi, PhD, MPH CHES
Editor, ***The Health Education Monograph Series***
Indiana University

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Volume 16 Number 1

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The Sexual Impact of Hysterectomy: Intervention Implications for Health Education

Kandice M. Johnson

Abstract

Hysterectomy is currently a controversial women's health issue. Given the prevalence of hysterectomy in this country, it is important to understand how this surgical procedure affects a woman's quality of life and sexuality. The purpose of this paper is to investigate the consequences of hysterectomy on women's sexuality through a review of the current professional literature by focusing on three areas: body image, partner relationship(s), and sexual functioning. Intervention implications for health education are also addressed.

Introduction

Prior to 1981, hysterectomy was the most common surgical procedure performed in the United States, and today it ranks second behind caesarean section (Kramer & Reiter, 1997). Approximately 576,000 hysterectomies are performed each year, half of which are performed on women still in their reproductive years (Graves, 1994; Williamson, 1992). For most women, hysterectomies are performed at midlife, between 40-45 years of age, at a time when interest in and gratification from sexual activity can be considerable (Leiblum, 1990). Given the prevalence of hysterectomy in this country, it is important to understand how this surgical procedure affects a woman's quality of life and sexuality.

Although there has been a decline in the number of hysterectomies within the last decade, hysterectomy is still one of the most controversial operations because of its unique medical, emotional, sexual, and economic consequences for women. The rate of hysterectomy in the United States is under investigation and is suspected of being higher than necessary (Reinish, 1990). The observation that hysterectomy rates are high and vary considerably between countries and even geographical regions within the United States has sparked considerable controversy among epidemiologists, gynecologists, feminists, and others (Cutler, 1988). Although the number of such surgeries performed annually has dropped by 160,000 in the past decade, many question whether the operation is over performed, and whether it may create as many problems as it solves (Hall & Cohen, 1994; Cutler, 1988). Growing epidemiological evidence challenges liberal use of hysterectomy. The uterus may have important systemic effects aside from its role in reproduction. Research suggests that the uterus protects premenopausal women from heart disease (Grimes, 1994). Hysterectomy increases a premenopausal woman's risk of heart disease even if her ovaries are retained. The uterus produces prostacyclin, which both vasodilates and reduces platelet adhesiveness; without prostacyclin from the uterus, women may have an increased risk of myocardial infarction until menopause (Grimes, 1994).

Only a small proportion of hysterectomies, 8 to 12%, are performed to treat cancer and other life-threatening diseases (Kramer & Reiter, 1997; Reider, 1987). The number of hysterectomies thought to be unnecessary is estimated at 33 to 72% (DeFreise, Evans, Rickett, & Cromartie, 1989). One of the reasons for the high rates of hysterectomy may be economic. Annual hospital costs associated with hysterectomy surpass $5 billion (Carlson, Nichols, & Schiff, 1993).

In considering the impact of hysterectomy on sexual behavior, one must adopt a biopsychosocial model (Leiblum, 1990). Environmental, cultural, interpersonal, and biological factors mediate the effect of any surgical procedure on sexual functioning. Hysterectomy, in particular, is an operation that has both symbolic and reproductive associations for women. The importance of the uterus as a psychosexual organ varies from woman to woman and encompasses a broad range of meanings (Sloan, 1978). The removal of the uterus renders future fertility impossible, a prospect that may be welcomed by some women and unwelcome by others (Drummond & Field, 1984). Even in parous women who do not want more children, the premature loss of childbearing ability may create worries about accelerated aging, inadequacy, and loss of femininity. Menstruation, although viewed as an uncomfortable and disabling experience by some, is perceived by others as a necessary part of womanhood, a valued means of setting the rhythm of life, and an important cleansing process that serves to rid the body of accumulated wastes (Darling & McKoy-Smith, 1993).

Because of the many significant meanings ascribed to the uterus, some women view hysterectomy as a threat to their health, vitality, and ability to function, and they may experience adverse psychosexual sequelae after this surgery (Bachmann, 1990). The removal of the uterus carries the same implications for altered body image and postoperative physical recovery as other major surgeries carry, but hysterectomy can also alter women's perspective on how she functions sexually and how she perceives herself as female. Gender identity based on any physical attribute is jeopardized when the physical characteristics are altered or removed. Thus, if a woman's gender identity is based on her uterus and it is removed, her femininity must be redefined in new terms of unalterable factors: personality, self-worth, accomplishments,

and other lasting elements (Cutler, 1988; Drellich & Bieber, 1958).

The purpose of this paper is to investigate the consequences of hysterectomy on women's sexuality through a review of the current literature. In order to determine the sexual impact of the hysterectomy, three areas are examined: body image, relationship with partner(s), and sexual functioning.

The Sexual Impact of Hysterectomy

The contemporary idea of body image incorporates a wide range of sociopsychological aspects and deals not only with how people actually look but how they think they look (Laufer, 1991). Body image is part of the self-concept that involves attitudes and experiences pertaining to the body, including notions about femininity, attractiveness, and physical capabilities. When women face surgery, as they do with hysterectomy, fears of being unacceptable, worthless, unattractive or unloved may emerge (Drench, 1994). A small surgical scar can greatly affect a woman who has placed a high value on a beautiful body. A loss or negative alteration of body image can be extremely traumatic and stressful (Drench, 1994).

While there are few controlled studies examining the impact of hysterectomy on body image, there is some suggestion that it can adversely affect body comfort in some women. In one study that examined body image in hysterectomized women by comparing them with mastectomy patients, research showed body image in the hysterectomized group was more impaired than either mastectomy patients or healthy controls (Anderson, 1987). Bernhard (1992) found that women, in terms of physical appearance, were most concerned with weight and the surgical scar. Among women who had undergone a radical hysterectomy, Roberts, Rossetti, Cone and Cavanaugh (1992) found a significant reduction of body image associated with reduced ratings of their sexual relationships and frequency of intercourse.

On the surface, hysterectomy may appear to be a biological event for some women, but it is also a psychological event for the woman, couple, and family, which can result in both sexual and relationship changes. If marital problems existed before the hysterectomy, they are often exacerbated afterward. The relationship can be affected by the woman's altered perception of her body image and/or a change in how her partner views her sexually after the surgery. Partners are not always supportive and are vulnerable to misconceptions. In Newman and Newman's (1985) study, two out of 12 husbands no longer viewed their wives to be sexually desirable after their hysterectomy.

The fear of rejection after hysterectomy is a threat to many women. This fear may be heightened if a woman perceives her partner as becoming distant and detached, thereby denying concern for her feelings or believing she is less sexually attractive (Annath, 1983). A hysterectomy is also likely to be associated with severe psychological trauma and perhaps adverse sexuality when it is medically necessary to remove the uterus prior to a couple's completion of their childbearing, and particularly if they have not yet had any children (Reinish, 1990). Lack of support by a partner has been found to be one of the best predictors for poor psychiatric outcomes after hysterectomy, whereas women with good partner support report less complaints of tiredness and depressiveness after hysterectomy (Webb & Wilson-Barnett, 1986).

Helstrom, Sorbom, and Backstrom (1995) researched the influence of partner relationships on sexuality after subtotal hysterectomy by interviewing 104 women before and after surgery. Sexual desire, activity, satisfaction, and dysfunction were compared among women without, with a poor, and with a good partner relationship. They found that half of the women reported better sexuality, and one fourth reported deterioration, when they were asked about the "global" effect that the hysterectomy had on their sexual lives. Women with a good partner relationship were more likely to improve than women without a partner or women with a bad partner relationship. The results of this study indicate that the quality of a woman's partner relationship is of great importance for her sexuality after hysterectomy. It can be suggested that women with no or bad sexual partner relationships should be regarded as "at risk" for deterioration of sexuality after hysterectomy.

The impact of hysterectomy on sexual interest and behavior can be quite varied, and reports of either sexual impairment or sexual improvement are common (Bernhard, 1992; Hampton & Tarnasky, 1974; Lalinec-Michuad & Engelsmann, 1984). The most common problems reported include painful intercourse, negative changes in orgasmic quality, reduced sexual sensations, and reduction or cessation of sexual desire. Generally speaking, it appears that those women who are most likely to experience postoperative sexual problems are those who have had their ovaries removed as well as their uterus. In the United States, approximately 36% of all hysterectomies are total hysterectomies with bilateral salpingo-oophorectomy, which is defined as the complete removal of the uterus, cervix, fallopian tubes and ovaries (Graves, 1991). Such surgery has the effect of catapulting the woman into early menopause. In these cases, it is likely that the estrogen deficiency as well as the reduction in testosterone is responsible for sexual difficulties. However, even women who keep their ovaries but have their uteruses removed may suffer hormonal changes if they are premenopausal. The ovaries stop cycling and stop producing the monthly variations in estrogen, progesterone, androstenedione, and testosterone in about 50% of premenopausal hysterectomized women (Cutler, 1988).

A necessary precursor for sexual arousal is the desire for sex. The libido, or sex drive, in the human is inspired both psychologically through such means as visual stimuli or fantasies, and physically through touch, smell, and the effect of circulating androgens. Androgens are important stimulants of the sex drive in both men and women (Persky, et al., 1982). Testosterone is the main androgen that increases proceptivity

(sexual desire) and receptivity in women (Wallen, 1990). A major source of androgens is the ovaries. Even after a natural menopause, the ovaries continue to produce androgens that help maintain the desire for sexual fulfillment. Oophorectomy in animals reduces female sex initiating behaviors, indicating decreased sexual desire (Wallen, 1990). Bellerose and Binik (1993), found that the oophorectomized women left untreated or treated with estrogen-only had significantly less frequency of sexual desire, masturbation, female initiated sexual activity, and ideal frequency of intercourse than women in control and androgen-estrogen replacement groups. The adrenal glands continue to produce some androgen after oophorectomy, but no entirely satisfactory way of replacing ovarian androgen is available that does not also produce some masculizing side effects.

Although some women may attribute changes in orgasm to emotional reactions to a hysterectomy, there may also be some physiological influences. Based on a review of the literature in this area, Reinish (1990) concluded that removal of the uterus may negatively affect some women for whom uterine contractions were an important aspect of orgasm. Normally, during excitement, the uterus enlarges slightly and elevates within the pelvis. This produces the tenting effect, a phenomenon characterized by two-thirds of the innermost part of the vagina ballooning (Masters & Johnson, 1966). The tenting effect is manifested in many women as a feeling of needing to be filled up or vaginal achiness, an intense desire for intercourse and for internal pressure. With hysterectomy, this phenomenon disappears. While it is not necessary for sexual fulfillment, the physical urge for penetration is noticeably missed by some women (Williamson, 1992). Scar tissue may prevent a full ballooning of the vagina, which may make intercourse difficult because the vagina is less expansive. Internal scarring or nerve damage may cause pain or interfere with feeling sexual pleasure. Furthermore, after a hysterectomy, the reduced quantity of tissue results in diminished vasocongestion that may reduce sexual arousal, as well as the probability of multiple orgasms (Dennerstein, Wood, & Burrows, 1977).

Hysterectomy usually includes removal of the cervix, which can decrease the length of the vagina, but not to the extent of preventing intercourse. It has been reported that the removal of the cervix may adversely affect sexual function because the cervix may act as a trigger for orgasm and preservation of the cervix is related with a lesser chance of developing dysfunctional symptoms (Kilku, 1983). Whether the absence of a cervix and/or uterus diminishes the intensity of orgasm by the loss of rhythmic contractions that occur in the organs or by the presence of scar tissue that may cause pain during thrusting is not well established.

Counterbalancing the view that hysterectomy necessarily results in diminished sexual functioning is the view that women who suffered pain, bleeding, and discomfort prior to surgery will experience relief following the removal of the uterus and/or ovaries. Not only may some women experience a reduction of physical pain and disruption, but there may be an increase in sexual desire because of the possibility of greater sexual spontaneity and lack of concern about safe, effective contraception (Leiblum, 1990).

Postoperative sexual functioning may be determined by the type of surgery done and whether the woman takes hormone replacement therapy. A study of hysterectomized and oophorectomized women found that women (Bellerose and Binik 1993) who were given estrogen only or left untreated reported lower sexual desire and arousal. Surgery relieved preoperative dyspareunia in some women but only in those who retained their ovaries or received estrogen replacement therapy. Untreated oophorectomized women appear to be especially vulnerable to arousal problems and dyspareunia.

Although there is conflicting evidence in the literature, some conclusions can be drawn regarding the effect of hysterectomy on sexual functioning. Overall, it appears that if there is clear preoperative distress and the woman understands and agrees with the reason for having the surgery, hysterectomy can alleviate physical distress and, indirectly, improve sexual satisfaction. On the other hand, if there is a preexisting history of depression, sexual difficulty, or other psychopathology, hysterectomy can result in the loss or reduction of sexual desire, orgasmic difficulties, and even avoidance of sex. If the ovaries are removed as well as the uterus, postoperative hormone replacement is important for maintaining vaginal lubrication and preventing atrophy. Androgenic stimulation may be important, as well, for enhancing libido.

Intervention Implications for Health Education

The American College of Obstetricians and Gynecologist (ACOG) has issued guidelines regarding the appropriate indications for hysterectomy (American College of Obstetricians and Gynecologists Task Force on Quality Assurance, 1989). The most common indications include recurrent uterine bleeding, leiomyomas, endometrial hyperplasia, endometrial polyps, cervical dysplasia, cervical polyps, pelvic relaxation, endometriosis, chronic pelvic inflammatory disease, chronic pelvic pain, and dysmenorrhea. Health education can encourage women to assume responsibility for their reproductive health by seeking primary preventive care services for these conditions. In addition, health education can facilitate women in making an informed decision regarding hysterectomy.

Only two of the hysterectomy indicators are currently recognized as potentially preventable, cervical dysplasia and chronic pelvic inflammatory disease. Both of these conditions are associated with sexually transmitted infections. Cervical Human Papillomavirus (HPV) infection is associated with 90% of all cervical dysplasia and a relationship exist between HPV-induced cellular changes and cervical cancer (Aral, Mosher, & Cates, 1991). An accurate determination of HPV prevalence is difficult because genital HPV infections

are not reportable conditions, and many infections are subclinical in nature, but it has been estimated that up to 10% of the sexually active population may harbor these viruses (Bartholoma, 1989). This would make HPV the most common viral sexually transmitted disease in the United States (Davis & Emans, 1989). Pelvic Inflammatory Disease (PID) is the most frequent complication of bacterial sexually transmitted infections, particularly chlamydia and gonorrhea. Each year more than one million women experience an episode of PID (Washington & Katz, 1991). Reducing the risk of sexually transmissible infections/diseases that cause cervical dysplasia and PID requires the use of safer sex practices, including correct and consistent use of condoms.

For early detection and early treatment to work, women must be able to recognize the early signs and symptoms of potential reproductive health problems, value the importance of periodic gynecological examinations and related routine screenings, and act accordingly. Many of the conditions listed by the ACOG have alternative treatment options available if the condition is detected in its early stages (Kramer & Reiter, 1997). Women should consult a physician promptly if there is an unusual occurrence in the genital or pelvic region such as sores, warts, burning or difficult urination, pelvic tenderness or pain, painful sexual intercourse, menstrual pattern, and unusual discharge (Alexander & LaRosa, 1994).

Current recommendations suggest treating most gynecological conditions with pharmaceutical agents, conservative surgery, or both (Kramer & Reiter, 1997). If conservation management fails, hysterectomy remains an effective treatment option for many women with gynecological problems. However, efforts must be made to identify women who are "at risk" for negative psychosexual sequelae prior to surgery. Additional patient education and counseling may reduce some of the negative consequences of hysterectomy in these "at risk" women.

In conclusion, hysterectomy does have a significant impact on many women's lives and the effect on sexuality is part of that impact. Health education can play a role in preventing conditions that lead to hysterectomy, informing women on the early signs and symptoms of reproductive health problems, and advising women about the consequences associated with hysterectomy and alternative treatment options.

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Barriers to Physicians Providing Health Education in Primary Care Settings

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Abstract

Providing effective health education in clinical settings has proven difficult, even with recent changes in the health care system. This paper focuses on six barriers to providing health education in a clinical setting: time constraints, insufficient reimbursement for health education activities, lack of health education knowledge and skills among physicians, lack of faith in patient compliance, the role of physicians, and the focus of the health care system on treatment rather than prevention. Overcoming these obstacles would require extensive reform in medical education, the structure of clinical settings, health insurance, and a complete change in the current health care system. Primary prevention must be used to bring about changes in morbidity and mortality. One solution involves integrating health education into the current health care system.

Introduction

During the present century, advances in science and medicine greatly influenced morbidity and mortality in the United States. With the threat of infectious diseases declining, chronic diseases emerged as the leading causes of death in the United States. Morbidity and mortality statistics reveal that the diseases causing most severe illness and death today relate to health behavior. Four of the top five leading causes of death (heart disease, cancer, stroke, and chronic obstructive pulmonary disease [COPD]) relate directly to lifestyle factors (Anderson, Kochanek, & Murphy, 1997). Behaviors such as smoking, diet, drug and alcohol use, and exercise are some of the most influential and modifiable factors (Insel & Roth, 1996). Therefore, in most cases, these diseases are preventable. Yet, the American health care system remains focused on treatment rather than prevention.

Current health care trends, such as health maintenance organizations and revisions in third party payer reimbursement, are attempting to incorporate prevention into primary care. Many preventive services are being delivered in primary care settings, including well-baby checkups, prenatal care, immunizations, and annual physical examinations. However, health education focused on disease prevention is not widely practiced. Though physicians believe health education is important, and that they should educate patients regarding the nature of their illness, physicians rarely practice health education (Goldstein, et al., 1997; Kushner, 1995; Verhaak & Busschbach, 1988). Studies cite several barriers to practicing health education in primary care (Arborelius & Bremberg, 1994; Goldstein, et al., 1997; Griffith & Rahman, 1994; Kottke, Brekke, & Solberg, 1993; Kushner, 1995; Russell & Roter, 1993). This paper focuses on six prominent barriers:

1. Time constraints during patient appointments
2. Insufficient reimbursement options for health education and health promotion
3. Lack of health education knowledge and skills
4. Attitudes toward patient compliance
5. Role perceptions: healer versus educator
6. The current focus of treatment rather than prevention

Time Constraints

Time constitutes one of the most limited resources for physicians. Consequently, physicians cite insufficient time most often when discussing why they do not provide health education (Kottke et al., 1993; Miilunpalo, Laitakari, & Vuori, 1995). A study by Russell and Roter (1993) showed that on average 20% of an office visit, approximately 4.5 minutes, is spent on health promotion topics. The same study showed that these discussions usually relate to a known illness or follow-up to a previous discussion (Russell & Roter, 1993). So, while 20% of the visit was spent on health promotion, the interaction usually dealt with an established problem, and not the prevention of disease.

Another aspect of limited time involves the length of patient visits. Most visits are not scheduled for a length of time adequate to cover the 'chief complaint' and health education. Thus, physicians must prioritize what they can address. "In a situation where they are short of time...[physicians] naturally restrict the scope of their counseling topics in favor of what they perceive as the essential objectives of the contact" (Miilunpalo et al., 1995, p. 326). If physicians do not limit their interaction to essential objectives, they will not have time to meet the needs of their patient population (Kottke et al., 1993). In addition, if the 'chief complaint' is not addressed to leave time for health education aimed at prevention, patients may become dissatisfied because the immediate problem was not sufficiently addressed.

Insufficient Reimbursement Options

The cost of health care has increased dramatically under

the third party payer system. Reimbursement is related to the complexity or risk associated with the care. Severe medical conditions cost more and, therefore, are reimbursed at a higher rate, particularly when comparing reimbursement for general practitioners compared to specialists. While physicians may not wish their patients to become ill before treating them, they may be less likely to spend time on prevention rather than treatment. Part of the dilemma relates to patient actions. Patients usually do not seek medical care before injury or illness. If they consult a physician for preventive services, insurance probably covers that service. A recent survey found that 61% of the physicians cited reimbursement as a major barrier to providing health education services (Kushner, 1995). If physicians are expected to provide sufficient health education, insurance companies must provide appropriate reimbursement for those services. As discussed previously, adequate time constitutes a major factor in the type of care provided. Physicians recognize that they must spend their time on problems identified by patients to receive reimbursement and to satisfy the patient (Kottke, et al., 1993).

Current trends involving health maintenance organizations and preferred providers in health care may improve the situation. These organizations use capitations where physicians are reimbursed at a fixed rate for each patient (Taylor & Lessin, 1996). This system encourages physicians to keep patients healthy to limit the number of office visits. Because physicians receive a set amount regardless of the number of patient visits, the physicians must keep patients healthy so they do not become overburdened with the patient's treatment. Many of the organizations list preventive services and health education services in their plans (Taylor & Lessin, 1996). These organizations could provide incentive for other insurance plans to keep up with the competition.

Lack of Knowledge and Skills

Surveys of physicians' knowledge and beliefs confirm that physicians feel health education is important, but that they lack the skills to help their patients develop positive health behaviors (Arborelius & Bremberg, 1994; Demak, & Becker, 1987; Kushner, 1995). Physicians doubt their abilities though many of them receive training on topics related to prevention. Kushner (1995) reported that over half of the physicians surveyed (58%) received training in nutrition during their medical education or while practicing. Yet, 67% felt they lacked proper training, and 50% felt a lack of confidence in counseling patients about nutrition (Kushner, 1995).

Another study, using the Health Belief Model and Social Learning Theory focused on how physicians discuss lifestyle issues with their patients (Arborelius & Bremberg, 1994). The Health Belief Model (HBM) in health education provides a framework for conducting needs assessments and compliance studies regarding preventive health behavior (Simons-Morton, Greene, and Gottlieb, 1995). The HBM includes four categories of beliefs that help determine whether preventive health behaviors will be adopted: perceived seriousness, perceived susceptibility, perceived benefits, and perceived barriers (Simons-Morton et al., 1995). Arborelius & Bremberg (1994) found that, "of the four constructs derived from the [HBM], the physicians most often attended to the patient's perceptions of susceptibility of disease. Yet two crucial concepts, the patient's perceived benefits and disadvantages of altered behavior, were not considered" (Arborelius & Bremberg, 1994, p. 27). This lack is apparent in the methods physicians used to encourage behavior change. The most common methods included condemnation of the patient's current health behavior and exhortations to change (Arborelius & Bremberg, 1994).

Successful lifestyle counseling cannot succeed in a hostile environment, or when patients view the health care provider negatively. Methods used by these physicians did not effectively serve the patient. Rather, they caused patients to react negatively to the physician's behavior and, consequently, they never receive the message. Physicians need adequate training to perform lifestyle counseling. "Such training ought to focus on a patient-centered approach. Concepts used in current models of health education would be useful, e.g., questions about the patient's ideas and concerns, helping the patient to consider advantages and disadvantages of altered behavior, and facilitating deliberate patient decisions" (Arborelius & Bremberg, 1994, p. 29).

For physicians who lack confidence in their health education skills, feeling positive about changing patient behaviors is difficult. According to Demak and Becker (1987, p. 10), less than 7% of the physicians interviewed "expressed confidence that they were 'very successful' in modifying any of six health-related behaviors (smoking, alcohol use, exercise, diet, drug use, and stress)." This study suggests for physicians to become confident in their health education skills, they need positive feedback regarding this practice (Demak & Becker, 1987; Kottke, 1993). Given the current trend in patient visits of seeking medical attention only when problems already exist, it seems unlikely that positive feedback can be received for preventive services. In the capitation system, positive feedback could encourage fewer patient visits which, in turn, would provide more time to treat and counsel other patients or to perform community-based health education.

Demak and Becker (1987) also found that physicians need positive interpersonal skills to effectively motivate behavior change. However, current medical education does not emphasize development of interpersonal skills (Verhaak & Busschback, 1988). Physicians should learn how to communicate with patients to facilitate the patients' understanding of their conditions and behaviors related to the condition.

Attitudes Toward Patient Compliance

Patient compliance relates directly to physician knowledge

and skills in health education. Physicians who believe patients will respond positively to education by adopting positive health behaviors tend to educate at higher rates (Millstein, 1996). Physicians who feel confident in their education skills relate the success of their patients to the health education. This connection relates to the notion of positive feedback from preventive services. However, most physicians lack faith in patient compliance. Some physicians view patient noncompliance as a cost of providing prevention (Demak & Becker, 1987). Noncompliance is also cited as a reason for not providing counseling for health promotion (Demak & Becker, 1987). Lack of patient compliance was cited as a perceived barrier to the delivery of nutrition counseling by 71% of physicians surveyed (Kushner, 1995).

Related to patient compliance is patient competence to understand health counseling (Goldstein, et al., 1997). Unfortunately, a trend can be seen in the types of patients who receive health education. Goldstein and colleagues (1997) reported that women, Whites, and those with more than a high school education were more likely to receive health education advice from their physician. In addition, physicians appeared more likely to discuss lifestyle factors with patients who already decided to change their behavior (Goldstein, et al., 1997). This fact illustrates that physicians are not willing to spend time educating patients whom they believe will not understand or use the information they provide. This attitude is unfortunate because patients who could benefit most from health education do not receive counseling.

Role Perceptions

Physicians view their role as unique. They provide specialized knowledge and skills to perform tasks required to treat a patient's medical problem. Physicians do not feel that they should perform tasks that can be done by others (Kottke et al., 1993). Therefore, physicians often neglect health education because they do not believe it is their job. Lack of teamwork in the medical community contributes to the problem. Physicians rarely adopt a team approach, and medical schools rarely emphasize teamwork. This practice has led to physicians viewing those willing to work in teams as weak and deficient, rarely being promoted or advanced (Kottke et al., 1993). These attitudes further delineate the roles of all involved in patient care.

These clearly defined roles can determine counseling practices (Miilunpalo et al., 1995). Health education objectives may differ between health care providers, causing the education to be delivered inconsistently and without continuity. Successful counseling could occur if health care providers reinforced the counseling provided by all team members. This approach would call for greater communication among health care providers. Membership on the health care team also should be examined. One resource for delivering health education that is not utilized enough is the community health worker. Community health workers are "community members who work almost exclusively in community settings and who serve as connectors between health care consumers and providers to promote health among groups that have traditionally lacked access to adequate care" (Witmer, Seifer, Finocchio, Leslie, & O'Neil, 1995, p. 1055). One barrier to using community health workers is that other health care providers do not grant legitimacy to these individuals (Witmer et al., 1995). Concern also exists regarding quality of care and training. Addressing concerns about using community health workers is important because they can provide a means for disseminating information between the community and health care professionals. The physician's role as healer would not have to change as drastically if other health care workers or health educators were used to deliver health education.

A Focus on Treatment

Prevention can be divided into three categories: primary prevention, secondary prevention, and tertiary prevention. Primary prevention focuses on preventing diseases or illnesses prior to their onset. Secondary prevention enables early detection and treatment before the disease or illness becomes severe. Tertiary prevention consists of rehabilitation to limit the disabilities caused by disease (Simons-Morton et al., 1995). Current medical care emphasizes secondary and tertiary prevention, or the treatment of an existing condition. As suggested by Russell and Roter (1993), physicians and patients believe secondary prevention is more prevalent than primary prevention.

Health education has a role in all three areas of prevention. However, the community would be best served by focusing on primary prevention. Despite this benefit, the current health care system "defines the clinician's job as responding to the complaints of an individual patient" (Kottke et al. 1993, p. 787). It is not surprising then, that the physician's training focuses on treatment of individual patients and acute illness (Kottke et al., 1993). This fact helps explain why the physician's perceived role has not changed despite changes in disease states. The focus on the individual patient, rather than on the community, has negative consequences. First, when physicians treat a patient as an individual, they separate them from their community. This approach is detrimental because community factors could be influencing the patient's condition, and these factors are being ignored by the physician (Witmer et al., 1995). Second, physicians do not consider population-based data as a source for helping them manage patients (Kottke et al., 1993). They could use population-based statistics to determine what health problems and health behaviors are prevalent in the community, and use this information to implement primary prevention.

One component of this barrier is that the promotion of health is a foreign concept to physicians (Demak & Becker,

1987). The role of physicians is to restore the health of their patients. It may be counterproductive to expect physicians to promote prevention of disease when their job is based on treating disease. "Physicians are being asked not only to integrate into their practice something which is unfamiliar and uncomfortable, but which is even seen as the 'enemy' of their central role: the provision of curative services" (Demak & Becker, 1987, p. 8). In light of the current role of physicians, integrating primary prevention into clinical settings may be extremely difficult.

Implications of the Barriers

Due to the nature of morbidity in the United States, effective education to improve health behaviors is essential to improving the health of the nation. Health education and health promotion have gained importance since adoption of *Healthy People 2000* by the World Health Organization (Verhaak & Busschbach, 1988). However, health education is not an integrated component of the health care system.

Aside from not having the time and resources to provide health education, physicians are not trained in the methods of health education. If they do not receive adequate training, it would be a mistake to assume that they can perform these duties. The skills and knowledge of methods required for health education should not be taken for granted. Changing human behavior, particularly behavior related to health, is extremely difficult. These behaviors deal with addiction, environmental influences, peer and familial influences, and ingrained habits. These responsibilities should not be left to someone who is not a health educator.

In reviewing the dynamics of the health care system one should question whether it is the proper setting for primary prevention. In addition to a lack of physicians with health education training, the clinical environment may not be the proper location to perform health education. The attention of the patient and the physician is centered on their immediate health problem. Concerns for preventing future problems or improving health in general may be low at this time. A physician referral for health education may be more beneficial to the patient. However, follow-up with the patient from both the physician and the health educator would be imperative. The clinical setting also may inhibit patient participation by not allowing them to leave the patient role (also called the sick role) and become an active proponent for their health (Demak & Becker, 1987).

Health education and health promotion can be aggressively used to improve the health of the nation. Consideration should be given to promoting a new sector of health care devoted exclusively to health education. Much energy and frustration could be saved if the focus is moved from trying to drastically change the physician's role in the health care system to promoting health education as its own field. Health education should be connected to clinical medicine where the two areas can work together in a partnership for better health for all.

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The School Health Education Study: A Chronology

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Abstract

Learning the history of health education is important. Mistakes are more easily avoided and successes repeated if the profession records its past successes and failures. Professionals knowledgeable about the history of health education have a more solid base of information to draw upon when engaged in teaching, research, and service. Additionally, recording the history of the health education profession encourages current practitioners to honor past leaders. One event within the profession of health education that contributed a significant amount of information about the status of health education in the United States in the 1960s was the School Health Education Study (SHES)(1968). *Reputable health educators collaborated to conduct a study and create a curriculum based on using concepts. The SHES was one of the first major health education studies devoted to assessing and improving the status of school health in the United States. Because of the SHES, an innovative way to teach about health was developed that was (and is) a progressive and helpful means for educators to show their students the "bigger picture" about health in addition to teaching about facts, values, and generalizations.*

Introduction

History preserves the past and helps society maintain perspective through the present. History also can lend its hand in guiding movement into the future (Means, 1962). As political history gives direction to government operations today, similarly, the history of health education should continue to play a role in providing professionals with useful information to draw upon when teaching, conducting research, and engaging in professional service.

More than thirty years ago, Professor of Health Education Edward B. Johns of the University of California, Los Angeles, made a statement in the foreword of *A History of Health Education in the United States* by Richard K. Means (1962) that still holds true today. "An important criterion of a modern profession is its substantial historical data accurately reported and recorded. Such data serve as a foundation, provide authenticity to present programs, and make possible the charting of future goals" (p.7). Without the pioneer work of past health educators, today's profession would have more to achieve with less of a foundation. To remember past achievements, from which today's modern profession springboards, historical reporting of significant health education events is necessary. Researching and recording history should be a priority for the profession while many health education legends and pioneers are still available to provide first-hand accounts of actual events and historical developments within the profession. One such landmark event with historical value was the School Health Education Study (SHES).

Like today, education reform was a priority in the early 1960s as a result of Russia launching Sputnik. The need to advance technologically, inspired curricula reform across the United States (R. D. Russell, personal communication, November 14, 1997; Johns, 1965). National curriculum projects materialized in health education as well as mathematics and science (Creswell & Newman, 1989). A push for prevention and positive health education as opposed to education primarily about treatment and prevention of disease began to surface during the 1960s (R. D. Russell, personal communication, November 14, 1997). The idea for the School Health Education Study began around 1960 with collaboration among Granville Larimore, First Deputy Commissioner, New York State Department of Health, Herman E. Hilleboe, and Samuel Bronfman (Butler, 1994). Forrest Connor, the superintendent of schools in St. Paul, Minnesota, was also involved in the beginning processes of the SHES (R. D. Russell, personal communication, November 14, 1997).

In 1961, the SHES received a grant from the Samuel Bronfman Foundation of New York City and established headquarters in Washington, D.C. Dr. Elena Sliepcevich, Professor of Health Education at The Ohio State University, was selected as the director for the SHES project (Rubinson, & Alles, 1984). In 1966, 3M Corporation (Minnesota Mining and Manufacturing) provided funding to complete the project (Mayshark, Shaw, & Best, 1967; Conner, 1967).

The federal government funded many major curricula projects/studies prior to the SHES. In part, because of Forrest Connor, 3M's involvement was the first time that a private corporation had funded a curriculum project. The 3M Corporation, which had just developed the overhead projector, saw a chance to use the SHES to market transparencies and overhead projectors (R. D. Russell, personal communication, November 14, 1997). Other groups that provided assistance in conducting the SHES were the American Association for Health, Physical Education and Recreation, National Education Association, United States Office of Education, the American Medical Association, the National Congress of Parents and Teachers, and the United States Public Health Service (Means, 1962).

Phase One

With the design and creation of the School Health Education Study, comprehensive school health education found its beginnings. The focus of the SHES, according to Means (1962), was "to determine the nature and scope of health education as it exists in elementary and secondary public schools throughout the country" (p. 305). The SHES was completed in three phases. The first phase was creation of a monograph titled *Synthesis of Research in Selected Areas of Health Instruction*. Contributors to this monograph were sixteen members of the American Association of Health, Physical Education and Recreation, Health Education Division (Mayshark, et al. 1967). The monograph consisted of 14 chapters with a wide variety of information related to research conducted in health education (e.g. instructional effectiveness, readability of textbooks, attitudes related to behavior change, curriculum planning, and health education history in the United States) (Veenker, 1963).

Creation of the monograph served several purposes. The first purpose was to show that key factors in relation to health instruction were researched. The monograph also reviewed health literature that indicated health education was, in fact, academic. One final purpose in creation of the monograph was to involve key leaders in health education to help legitimize the SHES and have all areas of the United States represented (R. D. Russell, personal communication, November 14, 1997).

Phase Two

The second phase of the SHES surveyed instructional practices, student beliefs and administrator perceptions of health education in the United States. (Rubinson, & Alles, 1984). An evaluation of student behavior also was completed (Mayshark, et al. 1967). Questions the study intended to answer about health instruction were:

What is being taught? Why is health education being taught? Who is getting the instruction? Who is giving and supervising the instruction? How is health subject matter included in the program? Where is health education being offered and when is health education being offered (Means, 1962, p. 305)?

Various sized school districts subsumed the survey which measured student knowledge and understanding about health (Means, 1962).

Stratification groupings of public school systems according to enrollment were used in the first stage of the sample. Next, a random sample of systems from each of the strata with 300 or more students was drawn at the rate of 1 in 10 of the large systems (25,000 and over) and 1 in 100 of the medium (3000 to 25,000) and small (300 to 3000) systems (Mayshark, et al. 1967, p. 157).

Twelve large, 23 medium, and 100 small school systems were surveyed (Mayshark, et al. 1967). Findings of the research revealed deficient health education curricula. Learners lacked health-related knowledge, and quality of instruction was less than sufficient (Bedworth & Bedworth, 1992). Misconceptions by twelfth grade students surveyed were cited in the summary report. Students generally thought it safe to consume unrefrigerated chicken salad. They also believed public health departments were the best source for medical diagnosis and treatment. One additional survey result indicated students generally thought that physical fitness increased with age (Mayshark, et al. 1967). Additional findings regarding health instruction and scheduling follow:

There was a more consistent tendency among the large districts to schedule health education as a separate subject in the individual grades from 7 to 12 than there was in the medium and small districts.

In the majority of secondary schools, boys and girls were separated for health instruction. In those instances where combined classes were scheduled, these tended to be the pattern more frequently in grades 7 and 8 than in the upper grades. Percentages of responses varied throughout the grades and among the districts. The majority of responses indicated that separate classes in health education for boys and girls were held because of staff, space, and scheduling problems. The nature of the subject matter as a reason for separation was mentioned to a far lesser extent and then mainly by the medium and small districts only.

At the secondary level, the large districts relied to a far greater extent than did the medium or small districts on local curriculum guides and local community influence in determining course content. The small districts depended heavily on the state course of study as a resource for deciding what to teach in health education (Mayshark, et al. 1967, p. 158).

Certain problems as seen by school administrators sampled by the SHES were also cited in the summary report. Administrators reported that families of students were not helping reinforce health habits taught at school. A lack of support existed from community and parents. Administrators indicated that professional preparation of health educators was deficient. Administrators surveyed additionally agreed that when health education courses were combined with physical education, health education was neglected. Other problems administrators faced were indifference toward health education by some teachers, parents, and other community members; and health education facilities and materials were not sufficient to meet the needs of the students or the teachers (Mayshark, et al. 1967).

Phase Three

The last phase of the SHES was development of a curriculum. Even though prior study and research had been con

ducted during the SHES, results had little influence on formation of the curriculum. "The SHES curriculum was not a band-aid to fix the problems found by the survey" (R. D. Russell, personal communication, November 14, 1997). Rather than using traditional health content areas to guide learning, the SHES developed concepts to which learning would be directed (Fodor & Dalis, 1966). The "concept" curriculum had become very popular among other content areas of education. The SHES wanted to focus on conceptualization because of its nature to assist in learning (*Health Education: A Conceptual Approach to Curriculum Design*, 1967).

"A concept, according to Russell, is 'a generalization about related data,' and it is 'usually organized as a result of a group of related sensations, percepts, and images with a label attached to them' "(*Health Education: A Conceptual Approach to Curriculum Design*, 1967, p. 5). Generalizations or concepts were used to organize the curriculum. The idea behind concepts was that they help the learner progress through a curriculum and attain a more complex understanding of the concept and the information associated with the concept by progression from kindergarten through twelfth grade (Fodor, & Dalis, 1981).

Edward B. Johns (1965) discussed in *The Journal of School Health* two factors that influenced the recognition of the benefit of using concepts. According to Johns, concepts render a relatively stable system of knowledge that provide a framework from which various facts and data can be taught. The second important factor regarding concepts explained by Johns (1965), was that health education is defined, to an extent, by the concepts that "define the domain of the discipline and determine its inquiries" (p. 197). Additionally, concepts "provide for a continual reexamination and use of the ideas on an increasingly deeper and more formal level" (Johns, 1965, p. 197). Johns (1968) also wrote in another article that the concept curriculum was flexible enough to be adaptable to new research and content as it became available.

The Framework of the SHES Curriculum

The integrative concept in the SHES curriculum was health (McKenzie & Pinger, 1995). Health was used as the umbrella concept that provided the opportunity to create a model from which health education curricula could be developed (Creswell & Newman, 1993). Concepts were not developed in the curriculum to be taught, but rather to serve as an aid in organizing facts, values, and generalizations. The SHES curriculum used a tri-dimensional image to represent the make up of the curriculum that consisted of separate triads within the image. Each individual triad represented health as a union of an individual's physical, mental, and social well-being, attitudes, knowledge, and practices that influence health related behavior, and family, individual, and community as entities where health education should focus (*Health Education: A Conceptual Approach to Curriculum Design*, 1967).

In addition to the triad model, three key concepts unified the SHES curriculum and created a base from which health education curriculum could be taught or further developed. The writers of the SHES curriculum intended for these three key concepts to "represent a process in the life cycle that is typical of every individual regardless of his sex, occupation, economic level, or social status"(*Health Education: A Conceptual Approach to Curriculum Design*, 1967, p. 16). These concepts were:

Growing and Developing. A dynamic life process by which the individual is in some ways like all other individuals, in some ways like some other individuals, and in some ways like no other individuals.

Interacting. An ongoing process in which the individual is affected by and in turns affects certain biological, social, psychological, economic, cultural, and physical forces in the environment.

Decision-Making. A process unique to man of consciously deciding to take or not take action, or of choosing one alternative rather than another (Oberteuffer, Harrelson, Pollock, 1968, p. 34).

Developed under the key concepts were 10 organizing concepts that helped define the extent of health education being incorporated into the curriculum. The concepts were written in language that could be inclusive so all that read them could understand their meaning (see Table 1).

Developed to fit beneath the 10 concepts were subconcepts intended to help support information taught in relation to the three dimensions of health: physical, mental, and social. These subconcepts were to help guide selection of health education material and help formulate additional objectives for the learners. Established after the subconcepts were long range goals designed to guide instructional experience in the cognitive, affective, and action domains. Additionally, behavioral objectives designed in progressing levels of complexity were added to the curriculum so that students would learn to use cognitive, affective, and psychomotor (or action) skills more effectively after participating in activities of sequenced health education (School Health Education Study, 1968).

Testing the Curriculum

The SHES curriculum was tested in four pilot centers (school districts) across the country (Green Kreuter, Deeds, & Partridge, 1980). Those centers were Alhambra, California; Evanston, Illinois; Great Neck-Garden City, New York; and Tacoma, Washington (Conner, 1967). The curriculum was revised and adjusted according to the feedback from health education teachers and students who used the curriculum. The SHES curriculum was a model intended to be

a guide for implementation at the local level. It was never intended as a national curriculum (Green, et al. 1980). The SHES curriculum was not widely adopted by school districts (R. D. Russell, personal communication, November 14, 1997).

In order for the SHES curriculum to become widely adopted, and implemented effectively, inservice education focusing on how to use this new concept-driven curriculum was needed. Privately funded projects, such as the SHES, did not have the fiscal resources to fund continuing education for health education teachers. As a result, the impact of the SHES curriculum fell short of its potential (R. D. Russell, personal communication, November 14, 1997).

Impact of the SHES

The use of concepts remains an innovative approach to health instruction. Fodor, Dalis, and Giaruantano (1995) describe how the use of generalizations can help organize a curriculum and develop themes from which to teach. The SHES is referenced as a landmark event in developing generalizations or concepts to be used in health education. Additionally, Marion Pollock (1987) maintains that a conceptual framework provides a stable link to current and developing content as opposed to various other types of curricula.

The School Health Education Study and the developed curriculum created an important path down which subsequent health education curricula could follow. The concepts or ideas behind the SHES seemed well ahead of their time. The idea of teaching to a concept may seem relatively new, especially to those in their early years as health education professionals. As history shows, however, using a concept, generalization, or idea and deriving relevant subconcepts and objectives has strong roots in the profession of health education.

Table 1: Ten Concepts of the School Health Education Study Curriculum

1. Growth and development influences and is influenced by the structure and function of the individual.
2. Growing and developing follows a predictable sequence, yet is unique for each individual.
3. Protection and promotion of health is an individual, community, and international responsibility.
4. The potential for hazards and accidents exists, whatever the environment.
5. There are reciprocal relationships involving man, disease, and environment.
6. The family serves to perpetuate man and to fulfill certain health needs.
7. Personal health practices are affected by a complexity of forces, often conflicting.
8. Utilization of health information, products, and services is guided by values and perceptions.
9. Use of substances that modify mood and behavior arises from a variety of motivations.
10. Food selection and eating patterns are determined by physical, social, mental, economic, and cultural factors.

Source: *Health Education: A Conceptual Approach to Curriculum Design*. (1967). Washington, DC: 3M Education Press.

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Travel Violence: Implications for Health Education

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Abstract

Interpersonal violence is a public health problem with diverse and complex causes. In recent months, travel violence has emerged as a public health concern. Over the past year, reported travel incidents have nearly doubled. Travelers on the road have become victims to aggressive drivers, or drivers suffering from road rage, projecting their frustrations on fellow drivers. Airline passengers also have created disturbances which interfered with the operation of a flight, causing significant injuries to airline personnel. The implications for health education include education, advocacy, program planning, implementation, research, and evaluation.

Introduction

Interpersonal violence is a public health problem with diverse and complex causes, occurring across all personal and public environments. In recent months, travel violence has become an increasing public health concern. Road rage is a form of aggression, induced by stress and manifested on the road. In 1996, one-third of all automobile crashes were linked to road rage as were two-thirds of automobile deaths (National Highway Traffic Safety Administration [NHSTA], July 1997). In the same year, the Federal Aviation Administration recorded 170 incidents involving unruly passengers who interfered with airline flight operations. This number equates to 3.2 incidents per week (Doss, 1997). Travel violence has resulted in traumas such as smashed knees, broken noses, second-degree burns, and death. Clearly, the public health community must address this growing problem.

In 1985, public health professionals were challenged by Surgeon General C. Everett Koop to "respond constructively to the ugly facts of interpersonal violence" (Mercy, Rosenberg, Powell, Broome & Roper, 1993, p.1). Interpersonal violence is any threat, or the use of physical force against another person or group resulting or likely to result in injury or death (National Committee for Injury Prevention and Control [NCIPC], 1989). Public health professionals are working to identify policies and programs that will prevent violent behavior, injuries and deaths (Mercy et al., 1993).

Since this call to action, the public health focus on interpersonal violence has expanded to address assaultive violence, child abuse, child sexual abuse, sexual assaults, spouse abuse, violence against the elderly, and suicide (Rosenberg & Mercy, 1991). Each type of violence is related to factors such as socioeconomic status, family history, age, and drug abuse. At this time, travel violence has yet to be limited to identifiable characteristics.

The Problem

According to the 1995 American Travel Survey, Americans traveled nearly 827 billion miles in 1995 on land and sky (Bureau of Transportation Statistics [BTS], 1997). The increasing volume of air and road traffic is producing congested travel environments which foster stress. Since 1990, road rage incidents have increased by 51% (Subcommittee on Surface Transportation, July 1997). Unruly airline passenger incidents have nearly quadrupled for some airline carriers since 1995 ("Flying Gets Turbulent," 1996).

Aggressive driving has been defined as driving conduct that threatens or is likely to endanger people or property (U.S. Department of Transportation [USDOT], 1997). Aggressive drivers are more likely to experience a high level of frustration and a low level of concern for other drivers. The anonymity of operating an automobile provides aggressive drivers with opportunities to speed, tailgate, weave, run stop signs and/or red lights, and use hand or face gestures (NHTSA, 1997). Road rage is a causal factor of traffic crashes, criminal assaults, and deaths. In 1996 alone, aggressive driving cost the nation $50 billion (NHTSA, 1997).

The Federal Aviation Administration's (FAA) annual commercial aviation forecast revealed that 605 million people flew in 1996. This number is expected to grow to nearly one billion by 2008 (Federal Aviation Administration [FAA], 1997). This increase in passenger volume suggests an increase in disruptive incidents. Incidents recorded and making national news include a passenger who poured hot coffee on flight attendants, resulting in second-degree burns (Associated Press, 1997). Another incident involved a flight attendant who was punched and pushed to the floor by a passenger when told there were no more sandwiches ("Arrival of Uncivil Aeronautics," 1997). There have been broken noses, scratches, and even choking of airline attendants ("High Crimes and Misdemeanors," 1996; "Arrival of Uncivil Aeronautics," 1997). This type of violence threatens all passengers when it occurs in transit. Violence also is occurring more frequently on the ground as travelers become frustrated by delay in flights, crowded airports, and missing luggage, aiming their frustrations at personnel ("Arrival of Uncivil Aeronautics," 1997).

The National Highway Traffic Safety Administration has identified three factors linked to aggressive driving: lack of responsible driving behavior, reduced traffic enforcement, and increased congestion and travel in urban areas (NHTSA, July 1997). The Air Line Pilots Association [ALPA](1996) regard alcohol consumption, smoking bans, crowding, and long flights as possible factors contributing to hostile passenger behavior. Still, the perpetuators and victims of travel violence appear to cut across all demographic classifications. As a result, there is no way of foretelling who is prone to road rage or will have a tantrum. Stress and frustrations, two catalysts for an outburst, are often asymptomatic.

Implications for Health Education

Existing workplace, community, and school violence prevention programs may offer strategic frameworks for designing travel violence education and intervention programs. Health educators will have to use the best strategies for disseminating information about travel violence, including print media, radio and television. For example, health educators can collaborate with radio advertising experts on designing public service announcements for play during peak driving times. With respect to school health education, existing health curricula can be modified to include information about road rage. Likewise, public health educators can collect and analyze information than can be used across all education settings for planning programs and developing media campaigns.

Educational programs should consider focusing on activities which explore attitudes and values toward travel violence. By using case studies and simulations, conflict resolution strategies and stress management techniques related to travel violence can be explored. Such activities have potential to provide individuals with skills necessary to react to warning signs and possible explosive situations, and help them understand the complexity of interpersonal violence.

With respect to research, travel violence is a complex problem requiring close examination of its antecedents. More information about perpetrators of travel violence is needed before adequate intervention and prevention programs can be designed. It is likely such information will expand our understanding of travel violence in general as well. Travel stressors and predictors of travel violence must be identified so that travelers and passengers can protect themselves against hostile travelers and drivers. Information accumulated from research will help health educators established priority areas for progam development, including subsequent program goals and objectives. Lastly, evaluation strategies which specifically target travel violence have potential to provide feedback needed to improve programs.

There are no easy solutions to the problem of travel violence in general and road rage in particular. Yet policy directives appear to be a logical first step. As advocates, health educators can help with policy initiatives that seek to control circumstances associated with travel violence. For example, health educators can encourage their respective professional organizations to support existing anti-violence campaigns.

Travel violence has attracted the attention of state and federal agencies and national organizations. Several states are using special highway patrols to target aggressive drivers (NHTSA, 1997). Last year, the Coalition for Consumer Health and Safety (1997) launched a safe and courteous driving campaign. At the federal level, the NHTSA is sponsoring several research and evaluation projects that focus on aggressive driving and speeding. Moreover, the NHTSA continues to serve as a source for technical assistance. For example, the NHTSA is currently sponsoring a project to identify innovative education programs, effective enforcement techniques, and legislative, prosecutorial and judicial needs. The results will be published and distributed nationally and effective techniques will be tested in other locations (NHTSA, 1997). The results might provide health educators with a source of data that can be used to plan programs and develop effective policies.

The Air Line Pilots Association sponsored a conference in 1996 on disruptive airline passengers (ALPA, 1996). The conference examined the growing problem of airline violence and possible solutions. Meanwhile, the FAA, working with air carriers, crew members, the Federal Bureau of Investigation (FBI), the Attorney General's Office, and local law enforcement agencies, has developed procedures to investigate passenger wrongdoing to facilitate the criminal prosecution of individuals who engage in hostile behavior (USDOT, 1997).

Conclusion

The economic and social impact of interpersonal violence demands new and creative prevention and intervention strategies (Page, Kitchin-Becker,Solovan, Golec, & Hebert, 1992). Health education programs must address the psychosocial aspects of travel violence as an emerging form of interpersonal violence. Interpersonal violence degrades social well-being by attributing to the costs due to lost work and increasing police and criminal justice interventions (Rosenberg & Mercy, 1991). The impact of travel violence on individual victims is easier to assess than its impact on society, but it appears that members of the latter are becoming more anxious and fearful about violence-related issues. Health education has made significant progress in identifying violence prevention strategies for interpersonal violence. It seems only appropriate that travel violence be added to the agenda.

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Arthritis Foundation
Aquatic Leader Community Service Project

Tammy Oberdieck & Missy Jordan

Abstract

Arthritis, affecting nearly 40 million Americans, or one in seven, is the number one cause of disability in America. It limits seemingly simple activities such as dressing, walking, and getting out of bed. Arthritis is typified by pain, stiffness, and swelling in or around the joints. These symptoms can occur slowly or with little warning. Many factors contribute to the development of arthritis including age, especially the elderly, obesity, heredity, and joint injury. The Arthritis Foundation Aquatic Program was designed to help relieve the chronic symptoms experienced by people with arthritis. The purpose of this project was to train and certify six Gammans to become leaders to conduct Arthritis Foundation Aquatic Exercise classes to better meet the needs of the elderly and those with arthritis in Kirksville, MO. As a result of the training and certification, six more aquatic exercise leaders were added in the Kirksville community. Now, 10 classes can be conducted biannually, meeting the needs of 10 community members with arthritis who were previously relegated to a waiting list.

Introduction

Arthritis, affecting nearly 40 million Americans, or one in seven, is typified by chronic joint and tissue pain that can be accompanied by disability, depression, and stress. It can affect people of all ages, but occurs primarily in the elderly. For many, it is a painful disease they must live with for the rest of their lives. Other psychosocial problems associated with arthritis include loneliness, fear of disability, uncertainty, helplessness, dependency, anger, grief, financial difficulties, and accessibility problems (Arthritis Foundation, 1994).

The Arthritis Foundation Aquatic Program helps relieve the chronic symptoms experienced by those with arthritis by providing psychosocial benefits, encouraging a sense of accomplishment, creating an outlet for stress and negative feelings, and promoting movement in warm water to improve function in daily activities. Physician approval is not needed for participation. However, it is recommended for people suffering from severe joint damage or muscle weakness (Arthritis Foundation, 1994). Often, the health care provider encourages patients with arthritis to participate in the activity.

In a heated pool, adult participants with any type of arthritis are led by trained personnel through a series of specially designed stamina-building exercises which, with the aid of the water's buoyancy and resistance, can help improve joint flexibility. The aquatic exercise classes are conducted three to four times per week for 35-45 minutes per session. The sessions primarily focus increasing motion range, but resistance from the water improves muscle strength as well (Samples, 1990). The classes follow a "two hour rule." If at the conclusion of a session a participant experiences joint, muscle, or arthritic pain for two or more hours, the person should decrease the intensity of the exercises (Arthritis Foundation, 1994).

The program teaches participants to be careful, to listen to their bodies, and to know their limitations. In addition, the program encourages self-management and responsibility regarding individual levels of exertion. The goals are both physiological and psychological. Decreased pain, improved mobility and endurance, and increased feelings of well-being are examples of goals the participants strive to attain. Encouragement and support from family members are important for participants to remain involved in the program (Arthritis Foundation, 1994).

Research demonstrates the benefits of exercise among people suffering from arthritis. Lack of exercise causes functional abilities to deteriorate more rapidly. Adding an exercise routine to their lives improves range of motion, muscular strength, and endurance. All are needed for joint protection. Many participants report improvements in their levels of comfort and mobility through structured physical activity programs (Samples, 1990; Tackson, Krebs, & Harris, 1997). In addition, there is evidence of decreased joint swelling and pain, increased immune functioning, and increased cardiovascular fitness. All of these benefits of exercise can occur without aggravation of arthritis signs and symptoms (Minor, 1996).

Because of physical limitations, some people with arthritis may not participate in hard surface exercise like walking or low impact aerobics. A water-based exercise program is ideal for these individuals because they can still gain many of the advantages of hard surface exercise without the stress or strain on arthritic joints. Exercises performed in water help mitigate symptoms of rheumatoid arthritis while also increasing mobility. The warm water and humid air soothe aches and protect lungs from asthma attacks (Hayman & Premo, 1992).

In a study conducted at the University of Missouri, 113 persons with arthritis participated in a land-based aerobic exercise program for 12 weeks. All improved their endurance, and the extent and severity of the arthritis tended to

decrease. The findings suggest that more vigorous but non-joint straining exercises such as swimming and water aerobics may have similar beneficial results for people with arthritis (Jones, 1992). Another study compared water aerobic exercise participants and nonparticipants who attended a rheumatic arthritis disease clinic in Kansas. Water aerobic activity participants reported significant improvements in their physical and mental well-being. Some of the benefits include decreased pain, increased muscular strength and endurance, less morning stiffness, lower levels of depression, and better daily functional abilities (Meyer & Hawley, 1994).

The Arthritis Foundation Aquatic Exercise Project

The purpose of this project was to train and certify instructors for the Arthritis Foundation's aquatic exercise program. The goal of the project was to increase the numbers of certified instructors in order to meet program needs in Kirksville, MO. Since 1994, and despite more than adequate physical capacity (i.e., pool facilities), only six aquatic exercise classes have been offered in Kirksville because of the limited number of certified instructors.

The training was conducted in cooperation with three local health organizations. The Arthritis Foundation is a nonprofit organization serving the needs of people who have arthritis. It is reported that participants of the Arthritis Foundation's programs have experienced less pain, fewer doctor visits, and a more improved quality of life (Arthritis Foundation, 1997). The Northeast Missouri Regional Arthritis Center, located at the Kirksville College of Osteopathic Medicine, is in its twelfth year of providing free or low cost services to elderly community members and those with arthritis in a 16-county area through a program sponsored by Missouri Department of Health. The Grim-Smith Hospital Department of Prevention, Wellness, and Education provides physical rehabilitation and wellness programs in its new "state-of-the-art" fitness and rehabilitation center.

In January of 1997, six female Truman State University Gammans, ranging from freshman to seniors and majoring in Community Health and Pre-Occupational Therapy, were interested in becoming trained and certified. They completed workshop application forms during an Eta Sigma Gamma meeting and returned them to the workshop trainer. During February, the Gammans satisfactorily completed a day-long YMCA aquatic safety course and received their Water Safety Assistant Certification for completing the safety portion of training. Upon completing the aquatic safety course, the Gammans were eligible for the eight-hour Arthritis Foundation Aquatics Program Workshop later in the month. Upon completing the workshop, all six Gammans received their Arthritis Foundation Certificate of Completion for the classroom portion of the training. They were qualified to conduct Arthritis Foundation Aquatics Program (AFAP) classes.

The Gammans were then expected to plan and conduct aquatic exercise classes. The planning included publicity, organizing registration, establishing pool schedules, obtaining class materials, and ensuring the correct water and air temperature levels when they conducted their classes. In addition, they were required to establish guidelines for attendance, active participation, the "two hour pain rule," session duration, and participant safety. All six Gammans submitted Leader Certification applications in May, including class rosters, to the Arthritis Foundation after teaching their first six-week series of AFAP classes. By the end of June, all six Gammans were awarded their Arthritis Foundation Aquatics Leader Certificate of Completion.

As a result of the project, the number of aquatic classes and participants increased. Specifically, between 1995 and 1996, the number of certified instructors increased from two to eight, the number of classes that were offered biannually increased from 6 to 10, and perhaps most important, the total number of participants increased from 36 to 46. Consequently, this project practically eliminated the waiting list for arthritis aquatic exercise classes in Kirksville.

Barriers

Scheduling an appropriate time to train the Gammans was difficult due to the students' school activities during the week. Therefore, the Gammans decided to attend weekend sessions. In order to become certified, each person had planned their own individual aquatic exercise class. Certification would be more convenient if more pool times were available to conduct the classes. Some trainees found it difficult to schedule the certification classes because of time constraints at the two pool locations. At the conclusion of the six-week series of classes, no follow-up activities were planned. However, Gammans encouraged the participants to attend future classes led by other Gammans. The leaders believed that most of the participants could continue the aquatic exercises on their own.

Conclusion

This service project is an ongoing program in Kirksville, MO. Graduates of Truman State University who are certified are being replaced by new Gammans so the service can continue. The Gammans feel that the program is successful and beneficial. The demand for leaders, and the Chapter's ability to provide them, is an indication of its popularity both within Eta Sigma Gamma and the Kirksville, MO community.

The Arthritis Foundation Aquatic Leader Community Service Project was a success for both the students who were involved and for program participants. By offering the aquatic classes to members of the Kirksville, MO community, both the Gammans and the participants experienced great benefits. Members of Eta Sigma Gamma learned new skills and were able to provide a healthful and important

service to those suffering from arthritis. The partnership between the students of Truman State University and the Kirksville community is an ongoing relationship. As more training sessions are conducted and as more leaders become certified, numerous individuals suffering from this chronic condition will have an effective outlet available to them.

***Note**: For additional information about the aquatic program described in this paper contact your local Arthritis Foundation office or call toll-free 1-800-283-7800.*

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Hepatitis A as an Emerging Public Health Concern

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Abstract

This paper describes the epidemiology of hepatitis A in terms of time, place, and person factors. A brief history of the disease, incidence of the disease, and persons at risk for infection also are discussed. Educational strategies and vaccine strategies aimed at prevention and reduction of hepatitis A are offered. Educational strategies focus on travelers, child care providers, teachers, parents, and children. Vaccine strategies include the most recent recommendations on use of the hepatitis A vaccine as presented by the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, the American Academy of Family Physicians, and the American Medical Association.

Introduction

The writings of Hippocrates (460-377 BC) allude to the occurrence of hepatitis A, yet the first recorded outbreak in the United States did not occur until 1812. Among the Union troops in the Civil War, hepatitis A was a health problem. It continued to pose a major threat to military readiness during World War II, and army officials encouraged scientists to study the disease. Research conducted at this time discovered the disease's brief incubation period and its mode of transmission (Gust, 1992).

Today in the United States, approximately 140,000 persons are infected annually with the hepatitis A virus, causing the Department of Health and Human Services to list hepatitis A as an important public health problem. This number, while quite large, reflects correction for underreporting, inaccurate diagnosing, and asymptomatic infections. The highest incidence of the disease can be found among children and adolescents, 5-14 years of age (Averhoff, Williams, & Hadler, 1997; Centers for Disease Control and Prevention [CDC], 1997; CDC, 1996).

Hepatitis A is caused by the hepatitis A virus (HAV), a 27 nm RNA virus. It is classified as a pathogenic picornavirus and is one of 49 notifiable diseases in the United States (CDC, 1997; Deinhardt, 1992; Timmreck, 1994; United States Food and Drug Administration [USFDA], 1992). Hepatitis A is one of four human hepatitis viruses known to be endemic in the United States. Clinical symptoms that characterize hepatitis A, and may indicate infection with HAV, include sudden onset of fever, malaise, nausea, anorexia, and abdominal discomfort, followed in several days by jaundice (yellowish eyes and skin) (Alter & Mast, 1994; Balayan, 1992). However, only serological testing for anti-HAV can provide evidence of HAV involvement in any illness (Balayan, 1992). Children under age five often do not experience clinical symptoms of HAV but can transmit the virus to others (Margolis & Alter, 1995). Full recovery occurs in nearly all cases of hepatitis A. Complications, however, may result in fulminant, or severe, hepatitis.

Feces are the primary source of HAV. Infectious virons also have been found in saliva and blood serum. Hepatitis A is primarily transmitted through the fecal-oral route (Alter & Mast, 1994; CDC, 1997). To fully understand hepatitis A, it must be described in terms of time, place, and person. Describing a disease in such terms defines the scope of the problem, provides a detailed description of the problem, and identifies those persons at greatest risk for infection (Stone, Armstrong, Macrina, & Pankau, 1996).

Time refers to onset or length of illness, time of infection, as well as to trends of diseases. *Place* refers to the geographical area associated with the disease implying that the important factors of the disease are present in the persons in the area or in the environment. *Person* factors are the major characteristics of the persons such as age, gender, race, immunization status, marital status, and social class (Stone et al., 1996; Timmreck, 1994). This paper describes the epidemiology of hepatitis A in terms of time, place, and person. Strategies for the prevention and reduction of hepatitis A also will be discussed.

Time Factors

Infection with HAV has an average incubation period of 30 days with a range of 15 to 50 days (Alter & Mast, 1994; CDC, 1997). The illness persists for approximately one to two weeks. HAV infection is confirmed in the acute or convalescent phase of infection by the presence of IgM antibodies to HAV (IgM anti-HAV). IgM anti-HAV may be found 5-10 days into the incubation period and remains detectable for 6 months after onset of illness. IgG anti-HAV also appears early in the course of infection and remains detectable for the lifetime of the individual. IgG anti-HAV provides life-long protection against the disease (CDC, 1997).

HAV concentration is highest during the 2-week period before onset of jaundice. Fecal excretion and communicability of HAV continue for approximately one week after onset of jaundice in adults. Chronic shedding of HAV in

feces does not occur (Alter & Mast, 1994; CDC, 1997). The greatest danger of communicability arises during the middle of the incubation period prior to development of clinical symptoms (USFDA, 1992).

Over the past four decades, rates of hepatitis A in the United States have cycled approximately every 7-10 years. Large epidemics occurred in 1954, 1961, and 1971, with the most recent sharp increase in reported cases occurring in 1989 (Alter & Mast, 1994; USFDA, 1992; Shapiro, Coleman, McQuillan, Alter, & Margolis, 1992; CDC, 1996). Hepatitis A epidemics typically are followed by a marked reduction in case levels the following year (CDC, 1996).

Place Factors

In the United States most hepatitis A occurs as a result of community-wide outbreaks with extensive person-to-person contact. Close personal contact with a person infected with HAV, such as contact occurring in households, day care centers, and during sexual contact accounts for most hepatitis A cases. Only 3% of reported hepatitis A cases result from food-borne and water-borne modes of transmission. In these instances, transmission of HAV commonly occurs with uncooked foods or foods touched by infected food handlers (CDC, 1997; Niu et al., 1992; Rosenblum, Mirkin, Allen, Safford, & Hadler, 1990).

Major multi-focal food-borne and water-borne outbreaks of hepatitis A, however, also result from food contamination before wholesale distribution. HAV can survive in water for 12 weeks to 10 months causing food-borne and water-borne outbreaks. Such HAV infection results from ingesting raw shell-fish harvested from sewage-contaminated waters, drinking fecally contaminated water, and swimming in contaminated pools and lakes (CDC, 1997; Niu et al., 1992; Rosenblum et al., 1990).

Person Factors

The highest incidence of hepatitis A occurs among children and adolescents ages 5-14, with 30% of reported cases occurring among children younger than age 15. Children infected prior to their fifth birthday often experience asymptomatic infection and, therefore, go undiagnosed and unreported (CDC, 1997). These children often serve as the virus reservoir that produces symptomatic infection in adults (Margolis & Alter, 1995). Persons younger than 40 years of age experience hepatitis A rates three to four times higher than the rates for adults over age 40 (Shapiro et al., 1992). Alter and Mast (1994) state, "the severity of clinical disease associated with HAV infection increases with increasing age" (p. 438). Children younger than age 6 account for less than 10% of icteric, or jaundice, disease, older children account for 40-50%, and adults for 70-80%. The case-fatality rate remains low: less than 1:1,000. However, high case-fatality rates are reported among children younger than age 5 and adults age 50 or older (Alter & Mast, 1994).

Margolis and Alter (1995) report rates of hepatitis A differ according to age, race, ethnicity, and socioeconomic level. Between 1983 and 1990, gender-specific rates for males were approximately 20% higher than female rates. Race and ethnic-specific rates show American Indians experiencing the highest rates of hepatitis A, followed by African Americans, Whites, and Asians. Hispanic hepatitis A rates are approximately twice the rates than non-Hispanics (Shapiro et al., 1992). In the 1996 Hepatitis Surveillance, the Centers for Disease Control and Prevention, reported that counties in the western United States, with 10% or more of the population classified as American Indian, had an average hepatitis A rate 3.5 times higher than counties with less than 10% of the population classified as American Indian (CDC, 1996). The same report noted that counties with 15% or more of the population classified as Hispanic had average hepatitis A rates 2.1 times higher than counties with less than 15% of the population classified as Hispanic (CDC, 1996).

Travelers to developing countries where HAV infection is highly endemic also are considered at risk for hepatitis A. The risk of infection "increases with duration of travel and is highest for those who live in or visit rural areas, trek in back country, or frequently eat or drink in settings of poor sanitation" (Alter & Mast, 1994, p. 439). Travel-related hepatitis A, however, often occurs in travelers with "standard tourist itineraries, accommodations, and food and beverage consumption behaviors" (Alter & Mast, 1994, p. 439). The Centers for Disease Control and Prevention (1997) report the risk for travelers to developing countries, who do not receive immune globulin, at approximately 3-5:1,000 per month of stay .

Men who have sex with men, and injecting drug users, also are at greater risk for HAV infection. Between 1982-1989 the rate of hepatitis A among homosexual men was less than 10%. In 1991, however, an increase in hepatitis A was reported in this population (CDC, 1997; Morbidity and Mortality Weekly Report [MMWR], 1992). The Centers for Disease Control and Prevention (1997) also reports "a prevalence of HAV infection among homosexual men several-fold higher than among control populations" (p. 16).

In the early 1980s an increase in hepatitis A also was observed among injecting drug users. In 1986, 19% of the hepatitis A cases were associated with injection drug use. By 1991, cases of hepatitis A due to injection drug use declined to 2% of all reported cases of HAV infection (Alter & Mast, 1994; CDC, 1997).

Implications for Action

In the prevention and reduction of hepatitis A, both educational strategies and vaccine strategies must be addressed. Standard preventive measures against hepatitis A at the community level include sanitary living conditions, safe drinking water, and appropriate sewage disposal. At the personal level, preventive measures include good personal hygiene,

with emphasis on careful and consistent hand washing (American Academy of Pediatrics, 1994; Deinhardt, 1992; CDC, 1994). To encourage and reinforce such behavior, educational programs must target populations most at risk including travelers, day care workers, teachers, parents, and children and adolescents.

Educational Strategies

Blair (1997) recommends international travelers visit a travel medicine practitioner to receive information on behavior modification, immunizations, and chemoprophylaxis regimens to increase the traveler's protection. A pretravel health education consultation considers the traveler's age and medical history, nature of the trip, duration of the visit, and most recent information on the area's disease outbreaks, terrorism, and natural disasters.

Health education and health promotion efforts in settings with caregivers such as a day care centers, elementary schools, and homes are three-fold. Educational efforts must address issues of personal hygiene, food safety practices, and environmental sanitation of facilities.

Caregivers, teachers, and parents must be willing to help children understand the importance of developing and practicing healthful habits. Hand washing is the easiest way to avoid infection of hepatitis A and many other diseases. Hygiene education encourages discussion of the advantages of washing hands regularly and thoroughly and teaches proper hand washing technique. Starr (1996) recommends establishing an explicit hand washing policy for caregivers, teachers, and children. It has also been recommended that day care workers use universal precautions for the handling of human feces (Newman, 1997; Olsen, Wong, Gordon, Harper, & Whitecar, 1996).

Food safety training should also be offered to parents and child care providers.
"To decrease children's risk of food-borne illness, caregivers must know and apply safe food handling practices" (Murphy, Fraser, Youatt, Sawyer, & Andrews, 1995, p. 281).
Issues that need to be addressed include the need for thorough hand washing prior to food preparation, and cleaning contaminated surfaces immediately with an appropriate disinfectant or an 1:64 dilution of freshly prepared household bleach (Murphy et al., 1995; Olsen et al., 1996). Other hepatitis A food-borne illness is likely related to contamination of food prior to wholesale distribution, or ingesting raw shellfish harvested from sewage-contaminated waters.

Environmental sanitation of child care facilities also should be a focus of health education efforts. Olsen et al. (1996) recommend, " children infected [with HAV] should be excluded from day care until one week after the onset of illness or jaundice, or until immune globulin has been administered to appropriate children and staff in the facility" (p. 1263). If parents are unable to find alternative care, isolation of infected children within the child care facility, in "get well" rooms, is a practical method of exclusion. Additional strategies for reducing the transmission of illnesses such as hepatitis A in child care settings and maintaining a sanitary environments are provided in Table 1 (Olsen et al., 1996).

Teachers and child care providers should receive in-service training on the transmission and prevention of hepatitis A. Hygiene education, infection control, and communicable diseases are part of comprehensive school health education. Young children may not understand the complexities of hepatitis A, but they are able to model healthful habits after parents and teachers, such as careful and consistent hand washing especially after using the bathroom and before preparing food. Additionally, the Texas Beef Council offers a food safety education curriculum for children K-5 (Newman, 1997).

Older children and adolescents who may understand other issues surrounding the disease, should learn about other risk factors associated with hepatitis A including the specifics of food safety, travel risk, and when age-appropriate, safe sexual practices, and drug use as they relate to the transmission of the virus.

Vaccine Strategies

Immune globulin (IG) may be administered to persons exposed to the virus, for temporary protection against hepatitis A. However, these measures, as noted by the Centers for Disease Control and Prevention (1994), "have had limited impact on the overall disease burden in the United States" (p. 9).

HAVRIX®, a formalin-inactivated vaccine, is the only licensed hepatitis A vaccine in the United States. VAQTA™, another inactivated vaccine, is available but not yet licensed in the United States (CDC, 1997). Both vaccines are described as "highly immunogenic, inducing anti-HAV titers above those observed following administration of IG" (CDC, 1997, p. 15). Research has shown HAVRIX®, after two doses of vaccine, to be 94% effective in protecting against clinical hepatitis A, and VAQTA™ to be 100% effective after only one dose (CDC, 1997).

Administration of the hepatitis A vaccine should be based on the epidemiology of HAV. Risk factors reported by persons with hepatitis A in the United States include persons with close contact with a hepatitis A patient (household or sexual), day care attendance or employment, travelers to developing countries, injection drug use, and male homosexual behavior (Alter & Mast, 1994; CDC, 1997; CDC, 1994). However, approximately 45% of persons diagnosed with hepatitis A have no recognized risk factors for infection (CDC, 1997; Shapiro et al., 1992).

Initial recommendations for vaccine strategies concentrated on at-risk adult populations, primarily persons traveling to developing countries or in military service (Alter & Mast, 1994; CDC, 1994). Averhoff, Williams, and Hadler (1997), based on the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, the Ameri-

can Academy of Family Physicians, and the American Medical Association, report adolescents not previously vaccinated, who live in communities with high rates of HAV infection and experience outbreaks of hepatitis A, also should be targeted for vaccination. Additionally, Averhoff, Williams, and Hadler (1997) report "adolescents should be vaccinated against hepatitis A if they a) have chronic liver disease, b) are administered clotting factors, c) use illegal injecting or noninjecting drugs ... or d) are males who have sex with males" (p. 302).

To prevent or control outbreaks in high-rate communities, routine vaccination of infants and young children has been suggested as well as catch-up immunization of older children and adolescents (CDC, 1997; Margolis & Alter, 1995). All vaccination strategies require discussion of the long-term efficacy of the vaccination, cost-effectiveness of preventing HAV infection, and the ability to combine hepatitis A vaccine with other childhood vaccines (Margolis & Alter, 1995; Margolis & Shapiro, 1992).

Until vaccination against hepatitis A is recommended for all young children and adolescents in all communities, educational programs should target at-risk populations and focus on the importance of handwashing in stopping transmission of the disease. As stated previously, children are an important source of infection. They often experience asymptomatic infection, and, therefore, provide a virus reservoir. Educational programs focusing on handwashing with soap and water after using the bathroom, after changing diapers, and before preparing and eating food is essential in breaking the chain of infection.

Conclusion

Vaccination is the best way to protect children and adults against hepatitis A. Margolis and Shapiro (1992) believe that given "the epidemiology of HAV infection ... the disease can be eradicated" (p. S86). As the nation sits on the edge of the 7-10 year cycle waiting for the next hepatitis A epidemic, education about prevention and reduction of the disease must be reinforced in day care centers, schools, and in homes. This reinforcement will increase the health of the nation's children and reduce the risk of the resulting unnecessary morbidity and mortality among other at-risk populations.

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Social Isolation Among Persons With HIV and AIDS

Robin Petersen

Abstract

HIV and AIDS might be the most catastrophic disease in human history and does not discriminate in its infection patterns. Many people who are infected with HIV and AIDS face challenges daily. Stigmas are placed on those with HIV and AIDS and can contribute to the victim withdrawing from society. The disease can affect the "whole" family by turning family members into care providers. Stress becomes an important issue in dealing with daily life surrounded by living with HIV/AIDS. The purpose of this paper is to increase the reader's understanding about the social implications associated with HIV infection and AIDS.

Introduction

An estimated 800,000 to one million Americans are infected with HIV, the virus that causes AIDS. Internationally more than 22 million people are infected, and by the year 2000, between 30 and 40 million people will be infected with HIV. Women now represent 50% of the HIV infected population. By the year 2000 it is estimated that 13 million women will be infected with HIV and four million women will die as a result. Every minute, two men and two women are newly infected with HIV (AIDS Action Committee, 1995). According to the Centers for Disease Control and Prevention (1997) adult and adolescent AIDS cases reported in the United States from July 1996, through June 1997, for men having sex with men were 38% and for heterosexuals were 14%.

In the 1980s and early 1990s the world witnessed the onset of what might prove to be the most catastrophic viral disease in human history (Hansell, 1993). The first cases of AIDS were reported in the early 1980's, and by the early 1990's, more than 1.5 million people had been infected with the human immunodeficiency virus (Miller & Zook, 1997).

Demographic Patterns and Social Conditions

The demographic patterns of HIV are not biased. HIV will infect those in any community, rural or urban. Social conditions that prevail in America's inner cities - overcrowding, homelessness, poverty and substance abuse, among others - are conducive to and fuel the spread of infection. Community-based response has expanded as the HIV epidemic enters various communities. Today, virtually every city of any substantial size in the United States has a community-created AIDS service organization (Hansell, 1993).

Despite the proliferation of organizations that address the needs of those with HIV, many seropositive individuals have significant unmet social needs. These unmet needs can cause emotional and physical isolation in one's own community. Persons infected with HIV can experience social isolation in every aspect of their lives. Rejection may be felt in the social environment which surrounds the HIV positive individual. Though legislation prohibits disability discrimination, HIV infected students, for example, may be rejected or socially isolated by their classmates. Likewise, infected employees may not disclose their disease for fear of being terminated. Many people infected with HIV fear losing the support of their families/friends when they need it most.

Prevention of social isolation can be accomplished through more education on psychosocial issues (e.g., general public acceptance), along with prevention strategies (e.g., destigmatization). Few community programs focus on accepting people with HIV and AIDS. Many in society fear HIV infected individuals because they do not know how to react to awkward situations involving HIV infected individuals. Eriko (1995) reports in dealing with AIDS that society goes through three stages. The first stage is characterized by panic as people react with fear to the dreaded disease. More understanding about AIDS nudges society into the second stage, where hysteria ceases and efforts are focused on using education to prevent AIDS. The final stage is a society where AIDS does not carry any stigma and the HIV-positives are treated no differently from sufferers of any other disease.

Social isolation can manifest itself in depression, hopelessness, loneliness, and possibly suicide. More education is needed to teach coping techniques to those infected with HIV. Support groups could provide HIV infected individuals with social opportunities, and provide educational programs such as stress management to improve their daily lives.

Emotional and physical health can be affected by the psychosocial results of HIV infection. Isolation, depression, and anxiety affect many HIV positive individuals at different levels. Historically, scientists have used an individual perspective that often ignores the social context of the disease. In tackling problems related to HIV infection and AIDS, understanding HIV-related behaviors in the social context in which they are learned and reinforced is a must. Fragmented approaches may intensify the problem and create an overwhelming sense of hopelessness on the part of.

the individuals with AIDS and their families, peers, and health care workers (Pequegnat & Bray, 1997). The family is the *de- facto* and often *de jure* caretaker when one of its members is ill or in trouble. Although this is true of cancer and heart disease, AIDS is different because multiple family members can be ill at the same time, and social stigma and "blaming the victim" add to the burden. Also, AIDS is changing the demographics of families by forcing new structure in relationships. Families in the second decade of AIDS often are burdened with chronic poverty, homelessness, multiple losses, and substance abuse. These contemporary AIDS sufferers feel the social consequences of belonging to different cultural and ethnic groups and practicing alternative lifestyles (Pequegnat & Bray, 1997).

Disruptions of the Disease Regarding Family, Friends, and Co-Workers

Individuals and families experience many problems in dealing with the disease. HIV infected individuals may encounter the following psychological or emotional disruptions, which may, in turn, negatively impact their families and friends: (a) trauma and fears about recurring illness episodes and impending losses; (b) grief for the loss of one's physical health; (c) isolation and rejection from family members and friends, contributing to the deterioration of marital and nuclear family relationships; (d) uncontrolled emotions resulting from the illness (e.g., depression, hopelessness, feelings of loss, confusion, loneliness, fear, and suicidal ideation); (e) guilt about having infected loved ones and fear of further infection; (f) difficulty in maintaining any "normalcy" or routine in living and loss of predictability and control in life; (g) anxiety related to fiscal resources, sexual activity, and medical outcomes; (h) the overwhelming task of relating to multiple health and mental health providers, along with lack of good medical care and counseling; (i) lack of available and affordable housing and related services; (j)possible need to address problems of substance abuse; (k) lack of respite from providing care and expressions of concern because of the unavailability of alternative child care; (l) need to plan for bereavement and future of survivors; and (m) handling the stigma of a dreaded, immoral, and fatal disease (Pequegnat & Bray, 1997). Psychosocial correlates may result in social isolation for those infected with HIV. HIV infected individuals may not be able to share their lifestyle with others, and thus, remain anonymous in sharing their concerns for fear of rejection.

If the statement were true that AIDS would not carry any stigma and HIV positive would be treated no differently within society, then revealing disease status to co-workers and peers would not be any more of a problem than someone who reveals to their co-workers or peers that they have cancer. Society becomes closer in communicating with individuals as they interact with them in a social and workforce setting. A report from the President's Commission on AIDS suggests negative reactions to people with AIDS (PWAs) may be an important problem in combating the AIDS epidemic. Fearing ridicule and rejection, HIV positive persons may impose their own personal quarantines. Because AIDS is a sexually transmitted disease that was first diagnosed among homosexual men and because it is still more common among them than any other social group, AIDS is strongly associated with homosexuality in the minds of the public. For people who do not harbor negative feelings about homosexuality, arguments about instrumental concerns (such as contagiousness) may influence how they feel about interacting with an AIDS-infected co-worker. (Pryor, Reeder, & McManus, 1991).

Many issues emerge in the daily interaction of peers and co-workers. HIV infected individuals have decisions to make on disclosing their disease to anyone. Mancoske (1996) reports that the Presidential Commission on AIDS character ized the public response as one of apathy. Many victims of HIV/AIDS seriously consider suicide because of not being able to deal with emotions and the fear of rejection. Many facets of depression, fear, and isolation are treatable aspects of this pandemic.

Advocates for HIV

Some of the strongest voices for primary prevention are HIV-infected individuals and organizations that advocate for them (Auerbach, 1995). Community response toward HIV and AIDS is improving. Charitable events are taking place, money is being collected for research, and people are starting to pay attention to the needs of people living with HIV infection and AIDS. Hansell (1993) reports that civil libertarians argued for legal protection of the privacy and confidentiality of those with HIV and for the right to freedom from discrimination on the basis of HIV status. Public health authorities came to realize that those guarantees, although inconsistent with the "traditionalist" approach, would further the goal of encouraging individuals with HIV to seek care and treatment voluntarily and in settings where medical and behavioral interventions were available. As further reported, successful public health intervention means influencing individual decision making in the direction of health promotion, but that requires giving affected individuals the tools to make and act upon appropriate decisions.

Individuals who are HIV positive or have AIDS often have a variety of fears and a range of depressive symptoms. Despite their distress, they do not often receive the psychological services needed. This neglect may be the result of psychologists' and other mental health care providers' reluctance to work with persons with HIV/AIDS. Psychologists now completing their training may be more likely to receive AIDS education and to know a person with HIV/AIDS than are psychologists who completed their formal training before the beginning AIDS epidemic (Flizar & Clopton, 1995).

AIDS has become a chronic disease. Long-term care of persons with AIDS in non-hospital settings has assumed increasing. importance. There are three motivations to care for persons with AIDS in a non-hospital setting: 1) limitations in hospital capacity, 2) the high cost of hospitalization, and, 3) the preferences of patients and providers for care outside hospitals (Berliner, McCormick, & Abrass, 1995).

Care providers can consist of family, friends, and medical staff. Care providers assist HIV positive individuals in making decisions and caring for them in times of need. The commitment to be a care partner is serious. Every day more and more individuals make this choice-sometimes eagerly, sometimes through force of circumstances. After making this choice, care partners become enmeshed in the medical and daily life of another person whether transporting them to a treatment facility or supporting them emotionally and physically. Care providers interact with health care providers and serve as a buffer and sounding board for the ill individual (Miller & Zook, 1997). Care partners are needed in the care of those with HIV to provide the individual with illness management skills.

Illness management skills are important for those with HIV and their families. Families can be important in deterring the spread of the disease because of their pivotal role in education and training about sexual behavior and health promotion. As AIDS has become more prevalent among heterosexuals, researchers have focused on risk reduction activities among families and social networks. Prevention actions within families typically take the form of education and interventions aimed at behavior change. Research is needed that explores family configurations, family structures, and interaction patterns that are specific and common in families with HIV/AIDS. Stress response patterns that families with HIV disease adopt need to be investigated, such as stigma, shame, and multiple losses (Pequegnat & Bray, 1997). Hansell (1993) reported that long-term behavioral change is necessary to achieve public health goals, which can be achieved by using strategies that elicit trust and cooperation of affected groups.

Auerbach (1995) reports that no one in the field of behavioral sciences argues that education and persuasion will work with all people in all situations, but there is sufficient evidence they often do. The psychosocial consequences of HIV/AIDS experienced at the level of the individual, the relationship, the community, and society must be recognized in terms in which they are experienced. Today, some of the strongest voices for primary prevention are HIV-infected individuals and organizations that advocate for them. More education needs to be incorporated into society today to dispel the myths associated with HIV. Although there is much education today regarding HIV prevention, issues related to living and working with an HIV positive individual must be addressed.

Implications for Research and Practice

New research on the psychosocial problems of people with HIV and AIDS is needed. Upon diagnosis, a majority of care in today's society has been based upon the physical aspect of the disease. Research regarding the emotional acceptance of the disease would be beneficial to those infected with HIV. HIV infected individuals must learn coping skills to assist them in the acceptance of their disease. Over time, people infected with HIV or who have AIDS will understand how to manage their own disease and will be forerunners in helping others to understand the disease.

Family, friends, and health care workers also need to be educated on acceptance of the disease. The disease does not only affect the infected person but has repercussions onto those around them. Family, friends, or even health care workers who have been trained regarding blood-borne pathogens may fear those infected with HIV. This fear could lead to isolating the infected person or the infected person isolating themselves from others if rejection is felt. Through education, prejudices against this disease could be turned into positive reinforcements for those infected with HIV.

Conclusion

HIV infection and AIDS are dreadful conditions. Though there are more health care resources in urbanized areas, people infected with HIV also live in rural areas. Many of the HIV/AIDS infected individuals in rural areas have to travel to urbanized areas for the support they need, whether it is health care related, psychological, or government assistance.

Health and well-being can be affected by psychosocial correlates such as isolation, depression, and anxiety. Many people with HIV or AIDS and their families have a difficult time dealing with the aspects of living with the disease on a daily basis. Stigmas are placed on those with HIV/AIDS and can contribute to the victim withdrawing from society. The HIV positive individual may not feel they are able to share their lifestyle, and thus, remain anonymous in sharing concerns for fear of rejection.

Although HIV and AIDS education has come a long way, more programs designed to dispel paranoia and the myths surrounding the disease are needed. Education on the stresses that surround individuals dealing with the disease is needed. The most important education needed today is learning to accept those with the disease and to provide the care and support they need in living with HIV/AIDS.

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Employment in the Nonprofit Sector: A Primer for Health Educators

Susan S. Thomas

Abstract

The major aim of health education is to provide "a combination of learning experiences designed to facilitate voluntary adaptations of behavior change conducive to health." Health educators work with populations ranging from the very young to the very old and everyone in between. Their job responsibilities include, but are not limited to, the planning, implementation, administration, or evaluation of programs, and the provision of direct health education services. As a result of the diversity in both the populations and roles of health educators, it is no surprise that health educators are employed in all three sectors of America's economy including the private, public, and nonprofit organizations. This paper seeks to provide a primer to health educators who are interested in working in the nonprofit sector. Specifically, it will discuss the "nonprofit health sector," describe characteristics of those who are best suited to work in nonprofit organizations, and give job search and interview strategies which are especially helpful to those looking for employment in this area.

Introduction

Health education, according to Green, Kreuter, Deeds, & Partridge (1980) is "any combination of learning experiences designed to facilitate voluntary adaptations of behavior conducive to health." Health educators may be involved in the planning, implementation, administration, or evaluation of programs, and the provision of direct health education services (Greene & Simons-Morton, 1984). As indicated by these broad-based descriptions of both the practice and practitioners, health education can take place in a variety of settings.

Students in undergraduate health education preparation programs generally specialize in one of three tracks within the field: school health, worksite health, or community health. As a result, health educators are employed in all areas of America's economic system including the profit, government, and nonprofit sectors. Those who choose to concentrate in worksite health promotion may look for jobs in the corporate or in the business sector. Health educators involved in this area can potentially work in employee health promotion or employee assistance programs of small companies or major corporations. A focus on school health could possibly result in government sector employment through the public school system. Community health educators can also find employment in the government sector through public health departments or federally funded agencies. Community health educators may additionally seek employment in the nonprofit sector, many times working in voluntary health agencies (Greene & Simons-Morton, 1984).

This paper provides a brief overview of the nonprofit sector. Specifically, it will discuss the health area of this sector, which is most likely to employ health educators. It will also describe characteristics of those who are best suited to work in the nonprofit sector, and give job search and interview strategies which are especially helpful for those looking for employment in this area.

Defining the Nonprofit Sector

The profit or business sector come to the forefront of many peoples' minds when describing potential employment settings, but it is also equally important to consider the nonprofit sector. Nearly 10 million Americans, making up about 8% of the workforce, are employed with nonprofits (Krannich & Krannich, 1996). Expenditures from this sector during the year of 1989 made up an equivalent of 6% of the Gross National Product. In the United States, there are approximately 1.1 million nonprofit organizations. This sector includes a vast array of agencies. For example, a one-room soup kitchen to aid the homeless with four employees or a massive hospital with hundreds of employees can both be considered nonprofit organizations. Although there is tremendous diversity among organizations that may fall under the umbrella of a nonprofit agency, there are six unifying characteristics. According to Salomon (1992), the nonprofit sector refers to a set of organizations that are:

- **Formal** - Usually nonprofit organizations have a legal identity under state law. They are generally chartered as corporations, making the organization a legal person. This enables a nonprofit to enter contracts and largely frees the officers from personal financial responsibility for the organization's commitments.

- **Private** - Institutionally, a nonprofit is separate from government and their governing board is not dominated by government officials. It is important to realize, however, that a nonprofit may receive significant funding or governmental support.

⟨ **Non-profit-distributing** - Unlike the profit sector, the major motivation of the organization is not to make profits for its owners or shareholders. Although organizations may accumulate profits in a given year, the money must be reinvested into the mission of the agency.

⟨ **Self-governing** - Nonprofits are equipped to control their own activities. These organizations have internal procedures for governance which are not controlled by outside bodies.

⟨ **Voluntary** – There is a significant amount of voluntary participation, either in the actual day-to-day operations of the organization's affairs or in the management of its affairs. Quite often, this takes the form of a voluntary board of directors, but extensive use of volunteer staff is also common. It is for this reason health education literature may refer to nonprofit agencies relating to health as voluntary health agencies. The term voluntary health agency describes only one aspect of a nonprofit organization, although the two terms are used interchangeably.

⟨ **Of Public Benefit** – The organization serves some public purpose and contributes to the public good. The above-mentioned characteristics are the underlying basis for separating nonprofit organizations from profit and government entities. Beyond these characteristics, variations within the sector become apparent. In general, there are two very different types of nonprofit organizations: member serving and public serving. Member serving organizations have some public purpose, but primarily exist to provide a benefit to the members of the organization. These include social clubs, business associations, labor unions, and cooperatives of different kinds. This category of nonprofit includes about 400,000 organizations (Salomon, 1992). Public-serving organizations comprise the majority of nonprofit organizations. These organizations exist primarily to serve the public at large. This may be accomplished in any number of ways including, but not limited to, providing education, sponsoring cultural activities, advocating for certain causes, and aiding the poor. The government recognizes the provision of public benefit by public serving organizations thus allowing them to be eligible for tax exempt status under 501(c)(3) of the federal tax law. This status gives these particular nonprofits a tax advantage not available to other organizations. Moreover, they are also allowed to receive tax deductible gifts from individuals and corporations. Because donors can deduct the gifts they provide from their taxes, they are more likely to contribute to nonprofit organizations with 501(c)(3) status (Salomon, 1992). Although there are other designations such as 510(c)(2) or 501(c)(4) given to nonprofit organizations, 501(c)(3) organizations are the most common (McAdam, 1986).

Public-serving organizations can be further divided into four major categories: funding intermediaries, religious congregations, political action organizations, and service-providing organizations. The chief function of funding intermediaries is to provide funding for other parts of the nonprofit sector. Organizations such as United Way and the Robert Wood Johnson Foundation would fall into this area. Religious congregations are organizations that primarily engage in sacramental religious activity such as churches, synagogues, or mosques. Political action organizations dedicate a large portion of their effort to campaigning and lobbying for legislation. Service-providing organizations deliver a vast array of services to the public. This group of organizations makes up the heart of the public-service sector. They are usually subdivided into arts, education, civic, social services, and health.

Health Care Nonprofits

In the nonprofit sector, public serving organizations are more likely to employ health educators, especially those interested in community health. At a cursory glance, it may appear that health educators would seek employment in the health care subsector. To a certain extent this is correct. Before this subsector is discussed further, it is important to take note that not all nonprofit organizations are easily assigned a single designation. For example, a religious institution may operate a private school or a hospital which would fall under educational and health organizations respectively. With that caution in mind, the health subsector will be covered in the remainder of this section. Hospitals, clinics, home health care, and nursing homes are most often mentioned in this category. These institutions concentrate on modifying the severity of a disease or disability after it has already occurred or rehabilitation. From a health education perspective, however, these are organizations that focus on the provision of secondary and tertiary prevention of illness (Greene & Simons-Morton, 1984). Health educators are mainly involved in providing primary prevention. This includes activities to prevent illness from ever happening.

Generally, this is accomplished through education. Many health care nonprofit organizations serve the need for health education in society. For example, March of Dimes provides many health education programs and literature to address the needs of women at reproductive ages including: *Starting a Healthy Family, Parenthood Education Programs, Healthy Mothers Healthy Babies, and The Curriculum Guide for Health Education: Nutrition.* The American Heart Association has developed educational material such as *Putting Your Heart in the Curriculum, Heart Health Curriculum, and School Health Packet.* The major focus is to educate people of all ages regarding their cardiovascular health. American Cancer Society has made available materials and programs aimed at cancer prevention such as *Take Joy, An Early Start to Good Health, Health Network, Cancer Challenge to Youth, and Who's in Charge Here.* According to Rubinson & Alles (1988), voluntary health agencies are key to achieving the objectives of health education.

Not all individuals who are interested in a career in the health industry want to be involved in direct delivery of care (Paradis, 1993). Health nonprofits deal with more than the actual delivery and the provision of health care services. They also address a vast array of health issues ranging from mental health, cancer, and family planning to AIDS, minority health care, and the disabled. Each major disease or medical problem area tends to have its own set of nonprofit organizations, many of which take a primary prevention approach to dealing with their respective health focus. They are involved in every aspect of the illness including supporting research, providing education, delivering services, and giving technical assistance. It is common for these groups to lobby for changes in government health care policies. "They comprise organizations focusing on some of today's most exciting issues, dealing with many of today's most passionate problems, and representing some of the nation's most powerful interests." (Krannich & Krannich, 1996, p.1) Many of these organizations are at the forefront of dealing with health issues of our time including cancer, HIV/AIDS, and birth defects (Krannich & Krannich, 1996).

Characteristics of Nonprofit Employees

One reason why people seek employment with nonprofit organizations is because the work is congruent with their ideals. Indeed, there are many similarities across job roles and responsibilities tied to employment in the nonprofit sector and those of health educators. The deep-rooted concern for people is at the core of many nonprofit workers' rationale for having chosen to work in this area. Being allowed to use highly professional skills on behalf of someone who would not normally have access to them can be quite rewarding (McAdam, 1986). This characteristic is very similar to that of health educators who are often charged with assessing the health and educational needs and interests of a target population. In fact, health educators are encouraged to become advocates for health care issues which have a potential impact on the health of the public (Rubinson & Alles, 1984). Another common drive among this group of workers is the demand for a fairly high ethical content in their work (McAdam, 1986). As health education continues to grow into a well recognized and an important profession, ethical issues are receiving more attention than ever. Butler (1997) asserts that "Health educators are probably involved in more ethical decisions than educators in other disciplines (p. 326)." Issues such as informed consent, privacy, instructional quality, and professional obligations are just a few examples. There is a vigilance on the part of many in the profession to maintain high ethical standards in all aspects of health education. While there are disagreements on which guidelines to adopt, most would agree that either the Code of Ethics proposed by the American Association for the Advancement of Health Education (AAHE) or the Society for Public Health Education (SOPHE), provide equally high levels of ethical consideration (McLeroy, Bibeau, McConnell, 1993). A third commonality among people in this sector is that they like feeling good about what they do. Health education works with people during all stages of life. No matter what the age group, health educators help people develop attitudes conducive to good health, acquire information necessary to make decisions about health, and improve self-efficacy. In other words, health educators help people help themselves. This can only lend to the job satisfaction experienced by health educators (Butler, 1997). Equally important is the drive of these employees to find a workplace that allows them to work with compatible and caring colleagues. Also, of value is the emphasis on service. Often, nonprofit workers see their job as an opportunity to serve others. Hendricks (1984) states "Perhaps the most important trait needed by the health educator is a genuine concern for people..." According to McAdam (1986), the word which ties together all of these driving forces is commitment. As shown by the many parallels between health educators and employees in the nonprofit sector, commitment is an apt description for both groups.

From the perspective of the potential new worker in the sector, all of these attributes may seem a bit overwhelming and a bit difficult to instantly develop. It is important to remember, however, that there is a wide range of employment opportunities in this sector, each requiring different levels of commitment and involvement. Many positions will allow you to ease into and develop the commitment which many nonprofit employees seem to find in their work (McAdam, 1986).

The qualities discussed above are often abstract and difficult to measure. For many, it is difficult to decide whether they have "what it takes" to work in the nonprofit sector. For this reason, a thorough self assessment of your interests, skills, and abilities, is an ideal way to begin a job search. The right self assessment tool will allow you to see strengths and weaknesses more clearly. Some which have been recommended in the past include *The Myers-Briggs Type Indicator* or *The Strong Interest Inventory* (Lynch, 1985; Sackett & Hansen, 1995). A newer assessment geared specifically toward individuals with an interest in nonprofit work is *Your NSL (Nonprofit Success Level) Quotient* (Krannich & Krannich, 1996).

The score from *Your NSL (Nonprofit Success Level) Quotient* provides an indication of an individual's potential for success in a nonprofit organization. Additionally, the questions provide an overview of the challenges which an employee in a nonprofit organization may face. For example, fundraising is very important to the financial solvency of almost all nonprofit organizations. It is an activity that most nonprofit sector employees must engage in at one level or another, regardless of their position in the organization (Herman, 1994). A question such as "Are you willing to engage in fundraising activities?" may challenge health educators to decide whether they want to participate in such a

duty, although it may not technically be part of their job description (Krannich & Krannich, 1996).

Finding a Job in a Nonprofit Agency

Nonprofit organizations are almost everywhere in America. They are located anywhere from small towns to suburbs to cities. Yet, the nonprofit sector is largely neglected by job seekers. According to Krannich & Krannich (1996) "Finding a job with a nonprofit agency is similar to finding a job with many other types of organizations. You first need to understand how the nonprofit job is structured, and then focus on where to find job vacancies, how to uncover job leads, and how to communicate your qualifications to employers" (p.34).

In order to understand how a nonprofit is structured one should conduct research on the organization. Knowledge is power in the job search process. Fortunately for those who seek employment in this sector, there is a wealth of information available on nonprofit agencies including books and the Internet. However, when it comes to actually seeking a position rather than simply learning about an agency, it is important to remember that many nonprofit jobs are never advertised. In fact, thousands of jobs are found and filled through informal means such as word-of-mouth, friends, family, and the ever present "connection" (Krannich & Krannich, 1996). It is for these reasons that the following hints offered by Collins (1997) may be helpful in the nonprofit job search:

- Volunteer - Why would anyone hire someone to work with volunteers if you yourself have never done it? Although it is possible to become employed by nonprofit without volunteer experience, volunteering is one of the best ways to develop the "hands on" skills many employers require.

- Do an internship. Many undergraduate professional preparation programs in health education require an internship. This is an invaluable experience which may also allow an individual access to positions that may not be advertised.

- Choose your position wisely. Make sure you will be doing the type of work you want to do and that it helps advance your career. The organization's mission statement can provide valuable information about the organization and where it is going. Most entry level nonprofit jobs have about a 1- year span before you are ready for the next level. Look for advancement opportunities.

- Be open to all types of nonprofits. Although health educators may focus on the health care sector, it is important to remember that other categories of nonprofits may also address health related issues. For example American Red Cross is sometimes listed as a social service organization. Yet this organization conducts many activities related to health education such as CPR, First Aid, and AIDS education.

- Stay at it! Job hunting is always tough, regardless of the type of position you are seeking. Stay motivated and you will be ahead of most of the crowd.

If the job search proves successful, an interview is likely to follow. McAdam (1986) offers some more specific tips for interviewing with a nonprofit organization:

- Be prepared for every interview - Research every organization carefully. Nonprofits usually have literature available about their organization such as a mission statement, strategic planning documents, and yearly reports. Some of the questions which you should answer include who are we as an organization, what are the basic social or political needs we exist to fill, how do we recognize or anticipate and respond to needs or problems, what is our philosophy and what are our core values? Other materials which may be helpful in learning about the organization may be the organization's website or other printed materials produced by the organization such as brochures.

- Follow Goldberg's two laws - Try and make sure that you are going to see someone with at least potential hiring power. Secondly, if you can't, see anyone who will see you.

- Be positive - Although you may be nervous, it is important to appear confident. Review your list of the 10 most impressive or important work tasks. Be prepared to describe each one of these accomplishments in your interviews. Make sure it is a sentence that begins with an action verb (i.e., I developed, I taught, I managed).

Conclusion

The nonprofit sector is an excellent place for health educators to work. It enables them to combine many of the competencies required of a health educator including communicating, planning, implementing, coordinating, acting as a resource, and evaluating with jobs that are challenging and rewarding (Greene & Simons-Morton, 1984). When deciding whether or not to work in the nonprofit sector, it is important to do a self assessment. If one feels that they have the qualities needed to work in this area, then it is important to learn about the nonprofit world. There are many resources which can provide this information. Equally important is making the inside connection with agencies where an individual might work. This can be done by interning, volunteering, getting to know individual, or otherwise becoming acquainted with the organization. The nonprofit sector is an employment avenue for health educators which has great potential to offer a job which is both meaningful and satisfying.

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Humor as a Stress Management Strategy

Tricia R. Weber

Abstract

Stress has become an increasing concern in today's society, as many individuals have not developed successful coping strategies to deal with the pressures of daily living. Recognizing the negative impact of excessive stress on emotional and physical health, health educators promote a variety of stress management techniques. Humor – the ability to perceive or appreciate what is funny, amusing, or ludicrous – rarely is recognized for its stress-reducing role. This paper reviews literature on the use of humor as a self-care tool. Psychological and physiological effects of humor on stress are examined. The expression of humor and laughter can act as a catharsis of emotions as well as provide valuable perspective and a sense of control. The physiological effects of humor and laughter may serve to counteract the debilitating effects of stress on the body. Various ways to incorporate humor in daily living are suggested.

Introduction

Most Americans experience a great deal of stress in their lives. Only within the past few decades, however, has stress become a popular topic in American culture. As our lifestyles have become increasingly hectic, the need for stress management has increased. The concern for stress is addressed in the document *Healthy People 2000*, which specifies objectives for reducing the adverse effects of stress, reducing uncontrolled stress, and increasing the number of worksite stress management programs (U.S. Department of Health and Human Services [DHHS], 1991). While we have made some progress, we actually have moved away from the target for reducing uncontrolled stress. In 1994, 35% of people aged 18 and older who reported experiencing significant levels of stress did not take steps to reduce or control their stress (DHHS, 1996). This rate is up from 24% in 1985 (baseline) and far from the year 2000 target of 5%.

Health educators are aware of a variety of interventions aimed at reducing stress, including cognitive restructuring, physical exercise and relaxation techniques, such as meditation and mental imagery. Unfortunately, many people are reluctant, or find it difficult, to incorporate stress management techniques into their daily lives. One rarely acknowledged coping tool is the use of humor. While often overlooked, humor can be a powerful antidote to stress. In addition, humor provides an easy and enjoyable way to cope with the pressures we face in our daily lives.

Historical Applications

Humor as a self-care tool is not a new concept. The ancient Greeks held humor as a virtue. The philosopher, Plato, believed humor nurtured the soul (Seaward, 1997). Proverb 17:22 tells us "A merry heart doeth good like a medicine." And the philosopher, Friedrich Nietzsch observed: "The most acutely suffering animal on earth invented laughter" (Metcalf & Felible, 1992, p.6).

Likewise, Bill Cosby may not be a great philosopher (depending on your point of view), but he too realized the power of humor. He is fond of saying, "If you can laugh at it, you can survive it." Many comedians, cartoonists, and comedy writers know the power of humor for overcoming difficult situations. Carol Burnett, whose parents were alcoholics and constantly fought with each other, is one of numerous comedians who used humor as a weapon for conquering painful circumstances.

Great leaders have drawn strength from humor as well. Abraham Lincoln suffered through many hard times, including failing in business, being defeated in politics several times, and seeing three sons die. He continually used humor, however, to gain the strength to go on. Klein (1989) tells us:

> *In a book about Lincoln, writer Keith Jennison says that, "Lincoln's ability to laugh, even during the bleakest days of the war, often astonished the people who worked with him. At one meeting during a bloody phase of the Civil War, the cabinet sat dumbfounded while he read aloud from a book of humor. After he finished, he admonished the others: 'Gentlemen, why don't you laugh? If I did not laugh, I should die, and you need this medicine as much as I do'* "(p. 6).

Studies of the military provide continued support for the stress-reducing role of humor (Dixon, 1980). The television show MASH was even based upon the power of humor to keep people sane and effective under the extreme pressures of wartime madness (Metcalf & Felible, 1992).

During the Great Depression, Hollywood lowered admission prices to films and produced hundreds of lighthearted comedies and musicals to provide people an escape from economic despair (Metcalf & Felible, 1992). Now, relentless change, rushed lifestyles, and increasing work and family demands are creating the need for stress reduction. Unfortunately, today's culture tends to inhibit humor. Four-year-olds laugh once every four minutes, while the average American grown-up laughs only about 15 times per day

(Sobel & Ornstein, 1996). It seems we are taught that growing up means "getting serious." We were told, "Wipe that smile off your face," and "This is no laughing matter." Laughter meant we were immature. In addition, when faced with problems we are expected to "buckle down" and work harder. "When the going gets tough, the tough gets going," became a battle cry. As a result, we set aside such indulgences as joy and laughter in favor of working harder and harder, striving for increased wealth and success.

Psychological Effects of Humor

Humor has the ability to produce profound psychological changes. It seems to function as a defense mechanism or survival skill against the cognitive stressors we face in today's world of relentless change. Dixon (1980) argues that humor may have evolved in humans specifically as a means of dealing with these sorts of stressors, which require mental rather than physical responses. Support exists for the emotionally therapeutic value of humor as coping behavior (Robinson, 1983). Sobel and Ornstein (1996) have said: "When confronted with a threatening situation, animals have two choices: they can flee or they can fight. We humans have a third alternative: to laugh" (p. 51).

Humor acts to reduce stress in several ways. First, it can diffuse feelings and emotions surrounding stressful circumstances. For example, Labott and Martin (1987) found that coping with humor acted as a buffer between negative life events and mood disturbances. Psychologists argue that the expression of laughter and smiling is nothing less than a catharsis of emotions (Seaward, 1997). Thus, use of humor may result in the relief of anxiety, stress, and tension; an outlet for hostility and anger; an escape from reality; and a means of lightening the heaviness related to crisis, tragedy, chronic illness, disabilities and death (Robinson, 1977). Nazi concentration camp prisoner and survivor, Victor Frankl noted in his book, *Man's Search for Meaning*, "that humor was a saving grace among fellow prisoners in the shadows of death." Frankl wrote "Humor was another of the soul's weapons in the fight for self-preservation" (Seaward, 1997, p. 229).

Second, by seeing the humor in a stressful situation, we may be able to change our perception of that situation. Kupier and Martin (1993) found that high humor individuals view potentially stressful situations in more positive and challenging terms rather than focusing on their negative aspects. Bischoff (1991) offered similar conclusions. He found high humor perception to be associated with positive reinterpretation of circumstances, personal growth, and the ability to face stressful circumstances more positively. The stress response depends not only on the situation but also on the perception of that situation (Selye, 1974). Thus, by changing how we view a situation, we may be able to decrease its stress-producing potential. For example, sociologist Suzanne Kobasa (1979) found "challenge" to be one of three "hardiness factors" which increases a person's resilience to stress. The other two factors were "control" and "commitment." She found viewing stressful situations as a challenge, rather than as a threat, acted as a buffer against stress. Thus, from a cognitive perspective, humor benefits us in two ways. Individuals who generally respond to life in a humorous manner may be less likely to perceive their environment as threatening and, therefore, may experience less stress. In addition, when stressful situations are encountered, these individuals may be able to cope more effectively with that stress by making more benign reappraisals (Kupier & Martin, 1993).

A third way humor helps in dealing with stress involves increasing the sense of control in one's life. As mentioned earlier, "control" is another "hardiness factor" that acts as a buffer against stress. Among persons under stress, those with a greater sense of control over what occurs in their lives will remain healthier than those who feel powerless in the face of external pressures (Kobasa, 1979). In one study, a group of nurses completed a training course in humor, while another group received no such training. Six weeks later only the experimental group showed significant changes in locus of control (Wooten, 1992). Being able to make light of a stressful circumstance allows one to feel some control over that situation. In addition, while we may not be able to control external events, humor can help us control what we can control – our perceptions, our emotional responses, and our reactions to potentially stressful situations. As a result, people who laugh at their setbacks feel uplifted and empowered.

The renown stress researcher, Hans Selye, believed that nothing could erase unpleasant thoughts more effectively than concentrating on pleasant ones (Klein, 1989). Humor instantly draws our attention away from our upsets. Thus, as a fourth effect, humor allows us to disconnect or free ourselves from negative thoughts and events. In doing so, we are no longer caught up in the chaos of the moment. We can step back and see the whole picture. When we do this, oftentimes our upsets no longer seem quite as large or as important. Klein (1989) writes:

Charlie Chaplin once said, *"Life is a tragedy when seen in close-up, but a comedy in longshot."* Mirth myopia is perhaps today's greatest disease. We get so caught up in our everyday struggles that we forget to step back and see the comic absurdity of some of our actions (p.13).

Physiological Effects of Humor

With his book, *Anatomy of an Illness*, Norman Cousins (1979) focused attention on the influence of humor and laughter on the body's physiology. During treatment for a serious disease of the connective tissue, Cousins used laughter as an integral part of the healing process. He surrounded himself with humor by watching Candid Camera videos, Marx Brothers films, and Three Stooges comedies. Cousins called laugh-

ter inner jogging, because when we are engaged in a good hearty laugh, every system in our body gets a workout.

The beneficial physiological effects of humor can be divided into two categories: 1) effects on the major physiological systems of the body; and 2) effects on the immune system. Mirthful laughter affects most of the body's major physiological systems. The initial effects seem to resemble the stress response. A slight increase occurs in heart rate, respiration, blood pressure, muscle tension, and the production of catecholamines and endorphins. This arousal state is followed immediately by a relaxation state where heart rate, respiration, blood pressure, and muscle tension rebound to below normal levels (Fry & Salameh, 1986). Once thought of as only a coping technique, humor therapy now qualifies as a relaxation technique as well because of these physiological effects (Seaward, 1997).

Effects of laughter on the immune system may be even more impressive. Through the emerging field of psychoneuroimmunology (PNI) we are just beginning to learn how our thoughts, emotions, and attitudes influence physical health. Research shows that stress has the potential to create unhealthy physiological changes. During the stress response, the adrenal glands secrete cortisol into the bloodstream. As one consequence of elevated cortisol levels, a functional impairment of the immune system occurs. Numerous studies demonstrated that a variety of stressors, including academic examinations (Glaser, et al., 1987) and divorce (Kiecolt-Glaser, et al., 1987), can alter many aspects of the immune response. Humor may, however, provide a protective factor against the immunosuppressive effects of stress. People with a strong sense of humor experience less impairment of immune functioning following stress (Martin & Dobbin, 1988). In addition, laughter may create immune changes opposite to those caused by stress. In a series of studies designed to measure the effects of laughter on the immune system, blood samples were drawn from subjects after viewing a 60-minute comedy video. Results suggest that laughter lowers serum cortisol levels, increases the amount of activated T-lymphocytes, increases the number and activity of natural killer cells and increases the number of T cells that have helper/suppressor receptors. Thus, humor seems to offset the immunosuppressive effects of stress (Berk, Tan, Fry, et al., 1989 & Berk, Tan, Napier & Eby, 1989).

Cultivating a Sense of Humor

Emotional health constitutes an integral part of optimal health, and, as health educators, we try to educate the public on various ways to manage stress. Unfortunately, many Americans do not take steps to reduce or control the stress they experience, even when informed of various stress management techniques. However, people often find humor an easy and fun way to combat stress. Humor should not be overlooked while presenting any stress management course, and health educators should help others cultivate an appropriate sense of humor.

Humor involves both a set of skills and an outlook on life. For some, humor is learned early in childhood as it is modeled and encouraged by parents. But for many, these skills have to be learned. Metcalf and Felible (1992) noted three humor skills that work to relieve tension, keeping us fluid and flexible instead of allowing us to become rigid and breakable, in the face of relentless change. These skills include:

- The ability to see absurdity in difficult situations.
- The ability to take yourself lightly while taking your work seriously.
- A disciplined sense of joy in being alive.

We can cultivate a sense of humor in several ways. In 1977, Joel Goodman founded The Humor Project, which provides various workshops, speeches, and training seminars for individuals, schools, and organizations interested in the constructive application of humor in everyday life (Goodman, 1983). Goodman also edits the magazine, *Laughing Matters*, a quarterly journal offering ways to incorporate humor in daily living. Among Goodman's suggestions:

- Collect funny bumper stickers, buttons, T-shirts and cartoons.
- Keep a humor notebook consisting of a running list of times you could laugh at yourself and humorous ways to define reality.
- Send a humorous greeting card to someone who might not expect it from you – be sure to send the card on a day other than a holiday or the person's birthday.
- Send someone an anonymous joke on a regular basis.

Allen Klein, author of The healing power of humor, recommends these smile-inducing strategies:

- Collect silly props, such as clown noses, bubbles or "arrow" headbands. Put on the clown nose the next time you feel anxious. Try blowing bubbles after an argument.
- Have a punch line ready. When life throws you a curve, try one of these applicable lines:

  Oh, what an opportunity for growth and learning.
  Take it back. It's not what I ordered.
  I have no time for crisis. My schedule is full.

- Exaggerate to the point of absurdity. If you are having a bad day, pretend you are in the I-had-the-worst-day-in-the-world Olympics.
- Keep a photo of yourself laughing in a place where you can see it often.
- Smile when you feel down or tense. Sometimes mood follows facial expression.

For those with computer savvy, humor, in the form of jokes, funny stories, and quotes, can be shared with others through E-mail. In addition, the Internet can be a great humor resource. Check out the American Association of Therapeutic Humor at ideanurse.com/aath/ for articles from the therapeutic humor literature as well as links to a variety of humor related websites, including *HUMORx*, *The Humor Potential*, *Jest for the Health of It*, and *HumorMatters*. These

websites provide information about humor workshops and seminars as well as access to humor resources such as books, audio and video tapes, and novelty items. In addition, a computerized humor assessment tool for surveying individuals' coping styles and personal humor preferences can be ordered from The Humor Project at www.wizvax.net/humor/.

Health educators can use three specific exercises to help individuals use humor and laughter in coping with and reducing stress (Cliff McCrea, 1996). In the first exercise, participants are asked to identify stressors in their lives that are particularly challenging to cope with and then to invent humorous ways of dealing with these stressors. For example, if traffic is the stressor, then two alternative humorous responses could be blowing bubbles out the car window or listening to a comedy tape. In the second exercise, participants identify difficult social and/or interpersonal situations they have been confronted with or may be confronted within the future. The participants then think about how humor could facilitate communication or assist in reducing the stress associated with these situations. In the final exercise, participants identify who and what makes them laugh the most. They can identify people, activities, or situations, movies/TV sitcoms, cartoons/books, and toys/games. Recognizing what makes you laugh is often the first step toward incorporating humor and laughter into your daily life.

A light heart can be good for business, as well. Humor can help prevent "burn out," inspire company-wide enthusiasm and increase creativity (Metcalf & Felible, 1992). At one Hewlett-Packard plant employees created a Lighten-Up Library. The room was stocked with magazines, books, posters, and video and audio programs that people felt were funny. A corkboard sheet was put up for participants to display their favorite cartoons and pictures of themselves and their families doing goofy things. The room was used for brown-bag lunches, upbeat conversations, and breaks. Bulletin boards displaying cartoons, jokes, and funny notes is an inexpensive way to bring humor into any organization. Marilee Pfarr, a Health Promotion Associate at Federated Mutual Insurance located in Minnesota, suggests companies hold a Humor Fest to provide employees with stress relief and to encourage the use of humor for stress relief on a regular basis (Association for Worksite Health Promotion, 1993). For one week in April a different video of a well-known comedian or a funny movie is shown each day during the lunch hour. In addition, on one day during the Humor Fest the company's own "stand up" comedians can perform.

Summary

Humor is a powerful stress-reducer. It has the ability to diffuse the feelings and emotions surrounding stressful circumstances, change our perception of stressful situations, increase a sense of control and disconnect or free us from negative thoughts and events. In addition, laughter may induce a state of relaxation, while acting as a buffer from the immunosuppressive effects of stress. Finally, humor is one of the easiest and most enjoyable ways to cope with stress. Thus, health educators should no longer overlook humor as a strategy for stress management.

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Ecstasy and Raves: Implications for Health Education

Jennifer Lee Wiley

Abstract

The chemical compound 3, 4 methylenedioxymethamphetamine, also known as MDMA or "Ecstasy," is a member of a class of drugs known as methozelated amphetamines. The drug's effects combine the rush of amphetamines with the consciousness-raising effects of psychedelics. Users often report that the drug creates a feeling of euphoria. This reaction has made it a popular drug of choice among youth, especially among youth attending all night dance parties known as raves. Raves and rave clubs, common drug-taking venues, have been on the rise in Europe and the United States since the late 1980s. Youth who use Ecstasy are not commonly taught in their academic curriculum about the drug. Users of MDMA are exposing themselves to health hazards such as depression, renal failure, and dehydration, which may lead to death. The growing popularity of the drug suggests that health educators include it as a topic in training programs and drug education curricula.

Introduction

Humans have been altering their external and internal environments since prehistoric times – "experimenting with a wide variety of plants and substances to improve…psychological and physical well-being" (Stimmel, 1993, p. 3). Use of mood-altering substances has become integrated into a culture's way of life and spiritual practices. Substances such as alcohol and nicotine have become so integrated into culture that they often are not considered drugs. "Although not labeled as such until recently, psychedelic drugs have been with us for a long time. The use of cannabis (marijuana), for example, is at least as old as the use of opium in the Middle East. All parts of the plant…were used medicinally, ceremonially, and recreational before the dawn of recorded history" (Seymour & Smith, 1987, p. 83). Other consciousness-affecting substances also played important roles in ancient and historical cultures.

In 1938, Dr. Albert Hofmann of Switzerland synthesized lysergic acid diethylamide (LSD). In 1943 he accidentally ingested part of the compound, thereby discovering the drug's profound psychological effects. Consequently, the most controversial chemical compound of the 20th Century was born with this discovery (Seymour & Smith, 1987). The use of LSD in psychotherapy quickly evolved to recreational abuse, especially among college students in the United States who followed the example of a Harvard University psychologist, Timothy Leary.

Around the time of LSD's increasing popularity, interest in other psychedelic substances was piqued. These substances included psilocybin mushrooms, which had been used in Mexico for more than a thousand years, nutmeg and mace, the seeds of the morning glory and Hawaiian woodrose vines, and a new class of drugs labeled as methozelated amphetamines. These drugs combined the stimulating effects of amphetamines along with the consciousness raising effects of psychedelics. Considered to be "alphabet soup" drugs, they include DOM, MDA, MDM, MMDA, MDEA, and MDMA.

History of Ecstasy

Designer MDMA, known as Ecstasy or *XTC*, combines hallucinogenic properties and stimulating effects. Known as the *love drug*, it has been popular among certain segments of college students (Carroll, 1993). Ecstasy (MDMA, 3,4-methylendioxymethamphetamine) is derived from the stronger, more toxic drug MDA. The original patent for MDMA was received in 1912 by the E. Merck Pharmaceutical Company in Germany (Hastings, 1994). The drug was first, but rarely, used in 1914 as an appetite suppressant. In the 1970s and 80s psychiatrists began to employ it to facilitate psychotherapy (Stimmel, 1993). Patients in MDMA therapy reported to be more open emotionally and to lose defensive anxiety. By doing so, they could touch thoughts and feelings ordinarily hidden to them (Grinspoon & Bakalar, 1986). Further, it allowed patients to remain in control of their thoughts and feelings, rather than the drug being in control, as in the case of LSD (Solowij, Hall, & Lee, 1992).

Although clinical uses of MDMA were not reported until the 1970s, nonmedical use first appeared in 1968 in the western U.S. Street use of Ecstasy was reported in Chicago by 1972, and by 1976 widespread use was reported in Boston (Siegel, 1986). In 1985, the Drug Enforcement Administration [DEA] estimated that Ecstasy was available in 21 states and Canada. The next year, clandestine laboratories were purporting to be located throughout the United States (Siegel, 1986).

"Because of its potential for abuse and its possible neurotoxic effect, MDMA was temporarily restricted as a Schedule, I controlled substance in 1985" and permanently scheduled as such in 1988 (Carroll, 1993, p. 316). Ecstasy had a

high media profile around the time of its scheduling. Its popularity spread to Europe, particularly the Netherlands and England, and to Australia. In these countries, it quickly became associated with dance parties and raves around 1989-1990. Since that time, an increase has occurred in *rave clubs*, dance and party clubs where drug taking is common (Inaba and Cohen, 1993; Solowig, et al., 1992; Rogers, 1993).

Social Use of Ecstasy

Siegel (1986) conducted a study to assess the nature and extent of nonmedical MDMA use. Forty-four users who met the requirement of having used Ecstasy at least twice previously in the past 12 months were recruited. Dosages of the drug ranged from 50-700mg. Subjects' ages ranged from 17 to 55, with 63.3% classified as students.

All users reported both positive and negative effects from the drug. Positive effects included "...changes in feelings and emotions (80%); enhanced communication, empathy, or understanding (68%); changes in cognitive or mental associations (68%); euphoria or ecstasy (63%); changes in perception (44%); and transcendental or religious experiences (11%)" (Siegel, 1986, p. 351). Negative effects included reports of jaw clenching and/or muscle tension by all users, increased sweating (91%), blurred vision (77%), loss of muscle coordination (77%), nausea (38%), and anxiety (15%). A total of 19 subjects reported perceptual phenomena, including nine who reported illusory or hallucinatory experiences in vision, touch, hearing, smell, and taste. Though all users experienced some negative effects, they rated their overall experience as pleasurable.

In 1992, Solowij, et al. studied the ways in which Ecstasy is used, and the nature of its effects, among users in Sydney, Australia. They also compared its effects to hallucinogens and amphetamines. The sample consisted of 61 males and 39 females, for a total of 100 subjects who had ever tried Ecstasy. Their ages ranged from 16 to 48 and 23% were students. The findings revealed that most users tried Ecstasy out of curiosity, for 'fun' and recreational purposes. Peer use was high. The most popular time for taking Ecstasy was on weekends when subject was off work the next day. Effects of the drug were reported to last from one to 12 hours with residual effects lasting up to 32 hours. This finding reinforced that recuperation time is necessary when taking Ecstasy.

The effects of Ecstasy were described as a positive mood state and intimacy. Reported effects included being talkative, open minded, sensual, euphoria, confident, and carefree. The pleasurable and positive effects of Ecstasy diminished with frequency of use and dosage of the drug, while severity of side effects correlated positively with these factors.

Some reported side effects included rapid heartbeat, insomnia, hot and cold flashes, sweating and sweaty palms, urination desires, and poor concentration. Twenty eight percent of the sample reported having psychological and physical problems related to their use of the drug including paranoia, panic, loss of control, anxiety, loss of reality, and hallucinations. Eighteen percent reported fainting, decreased respiration, chewing mouth, and jaw clenching. Sixteen percent reported nausea and vomiting.

Morbidity and Mortality Associated with Ecstasy Use

Though reported side effects from Ecstasy, in both clinical and social settings, last only for a brief period of time, growing evidence suggests long term residual effects. Numerous studies and reports confirm the short- and long- term hazards of Ecstasy use. These hazards range from physical, neurological, and psychiatric disorders to death. Minor side effects include loss of appetite, jaw stiffness, and a desire to urinate (O'Connor, 1994). More severe side effects can include depression, psychosis, hyperthermia, and acute renal failure.

Findings from studies conducted with rats and monkeys showed MDMA depletes serotonin (Ricaurte, DeLanney, Irwin, & Langston, 1988). To study the effects of MDMA on humans, Simantov and Tauber used "placental serotonergic cell line JAR...and human dopaminergic cell line (NMB) that expresses dopamine, but not serotonin transporters, ... to verify the selectivity of the drug" (1997, p.141). They found that within 12 hours the JAR cells shrunk, had a smaller and darker nucleus, the membrane lost its brightness and smoothness, and pieces of the cell appeared in the culture medium. In the presence of dopamine there was enhanced toxicity of MDMA to the JAR cells. The findings suggest that interactions occur between dopamine and MDMA at the cellular level. Dopamine release is enhanced by the activation of 5-HT_2 receptors when MDMA neurotoxicity (in vivo) is activated by serotonin.

Depression and suicidal and aggressive behaviors all have been linked to a dysfunction of the central serotonergic system. Psychiatric disturbance is associated with Ecstasy use (O'Connor, 1994). In 1986, three reported cases of dysphoria and panic attacks were published in the *American Journal of Psychiatry*. One case involved a 26-year-old woman who ingested MDMA one time. Thirty minutes after ingestion she felt a nervous rush and inner trembling. Nausea, ataxia, vertigo, fear of imminent death, tachycardia, and hyperventilation followed (Whitaker-Azmitia &Aronson, 1989).

McCann and Ricaurte "describe an individual with no prior psychiatric history who developed panic disorder after ingesting a single typical dose of MDMA" (1992, p. 950). This diagnosis was made according to DSM-III-R. The patient was a 23-year-old college male who took the drug with two friends. For four days he felt fatigued and had trouble concentrating, "when he felt a sudden sense of extreme anxiety, with palpitations, tremulousness, and nausea, leading him to believe that MDMA had damaged his heart" (p. 951). His physician diagnosed him with anxiety, and after weeks

of persistent symptoms, with panic disorder. Although a cause/effect relationship cannot be inferred, further cases of Ecstasy-induced psychosis, flashbacks, and psychological disturbances have been reported in *Addiction* (Curran & Travill, 1997), *British Journal of Psychiatry* (Creighton, Black, & Hyde, 1991), *British Medical Journal* (McGuire & Fahy, 1991), and *Society of Biological Psychiatry* (Schifano & Magni, 1994).

The physical dangers of Ecstasy can be catastrophic or even fatal. A case report by Barrett and Taylor (1993) showed "biochemical and hematological (blood) evidence of rhabdomyolysis, acute renal failure and impaired liver function in a 23-year-old male after ingesting a single tablet of Ecstasy and some amphetamines" (1993, p. 233). Rhabdomyolysis involves the disintegration or dissolution of skeletal and cardiac muscle cells that store oxygen in the urine. The cause of the patient's acute renal failure was uncertain because that reaction had only been reported previously with amphetamine toxicity. Other reports have shown that liver toxicity is possible from single or multiple exposures to MDMA. Liver transplants have been required for some patients (O'Connor, 1994).

Many other problems with Ecstasy use have been reported such as hyperthermia, increased heart rate and blood pressure, hyperkalaemia, and disseminated intravascular coagulation (Hayner & McKinney, 1986; Henry, Jeffreys, & Dawling, 1992; O'Connor, 1994). Hyperkalaemia is likely to be the cause of acute renal failure in the above cases.

Death - the most hazardous effect of Ecstasy - has been documented among people who have ingested small and large dosages alike. It is difficult to estimate the number of deaths related to the drug because many deaths are attributed to the physical problems that Ecstasy produces. Research indicates that factors such as hyperthermia, liver failure, heat stroke, and water intoxication significantly contribute to death associated with Ecstasy use. In such cases, MDMA may be present in the blood of the deceased, or friends may have reported that the victim had taken the drug.

Dowling, McDonough, and Bost (1987) described five patients in Dallas County in which the drug or one of its analogues, MDEA, was thought to be a contributing factor in the death of each. Two patients died of car crashes in which Ecstasy was found in their blood. Another, with a history of asthma, was found dead beside his car. MDMA was found in his blood. The fourth, a 18-year-old female who had ingested one and a half hits of Ecstasy, collapsed shortly thereafter and showed pulmonary congestion and edema. The fifth case involved a man who died after taking what he thought to be Ecstasy, but was really MDEA. No trace of MDMA was found in his blood.

Seven other deaths were reported in a 1992 article in *The Lancet* (Henry et al., 1992). The decedents were reported to be between the ages of 16 and 21. All had taken Ecstasy at a party, concert, or club, and then began to have seizures. Hyperthermia, increased heart rate, rhabdomyolysis, and gastrointestinal hemorrhage are just a few of the listed clinical courses of the patients. Times of death ranged from two and half hours after ingestion to 18 days after being admitted into the hospital.

Mixmag, a British magazine for dance music and 'club culture,' published an issue about the deaths and possible long-term effects of Ecstasy in the UK (Phillips, 1997). In the issue, Paul Betts, the father of a girl who died of an overdose, estimated that 50 deaths occurred in the past year alone. Five reported deaths over the Christmas and New Year's holidays are thoroughly documented. All victims were young adults, ages 16-22, who had taken the drug at a party or a club (rave).

Ecstasy Use Among Youth

Ecstasy is a drug of youth. In early clinical trials it was used among older patients, but the spread of it into recreational use made it more attractive to young adults. Raves are where Ecstasy is most often used. The majority of people who participate in raves are between 16-25 years of age (Brown, Jarvie, & Simpson, 1995). This age range not only includes those in college but also high school. With the growth of rave clubs, the use of Ecstasy among that age group likely will continue to rise. Though few epidemiological surveys have been conducted, an estimated 40% of college students have had some exposure to MDMA (Elk, 1996). A Monitoring the Future press release (1996) estimated the self-reported Ecstasy use among 10th and 12th graders at 5%, and 1996 was the first year that questions about students' MDMA use were included in the survey (University of Michigan, 1996).

Ecstasy use on college campuses was reported in 1987 and again in 1994. In the 1987 report, Stanford University undergraduates were randomly and anonymously polled about their possible use of MDMA. Thirty-nine percent of subjects reported they had used the drug at least once (Peroutka, 1987). Results from a 1990 study of undergraduate students from Tulane University, found an increase of Ecstasy use over a four-year period from 16% to 24% (Cuomo, Dyment, & Gammino, 1994). The researchers concluded that because two-thirds of the undergraduate students at the university were from out of state, the findings also reflect drug use among college students outside of Louisiana.

Implications

Since its discovery, MDMA has been used in clinical and social settings. MDMA was renamed Ecstasy by recreational drug users who find the name fitting for the drug because of the positive mood state and heightened awareness it produces. Unfortunately, the positive effects often are followed by a multitude of negative residual effects including, but not limited to, depression, paranoia, hyperthermia, tachycardia,

acute renal failure, and death. Because of Ecstasy's popularity with club goers and people who attend raves, the setting may worsen the physical side effects. Users might dance for hours and not even stop for a drink of water, therefore, causing difficulty in body functions, such as urination.

Evidence of the harmful clinical effects of Ecstasy is abundant in professional medical journals. Readers of these journals usually include physicians, medical students, and public health professionals, not youth and young adults who may be using this drug. Consequently, those most commonly encountering or using the drug receive limited information about the effects and dangers of MDMA (Elk, 1996). Also, because harmful effects from Ecstasy may not be immediate, users may not question its safety.

Elk points out that "MDMA is being used by adolescents and college students who are exposed to information regarding other substances of abuse in their academic curriculum but MDMA is often excluded" (1996, p. 355). Omission of information about Ecstasy in drug education programs or classes may imply to the students that the drug is safe. Drug and health educators also may not be aware of the dangers of Ecstasy if the topic is not included in the curriculum or in their training sessions. The greatest danger about MDMA involves the lack of information about its use (Elk, 1996).

Health educators should receive training about Ecstasy and the rave culture. As previously cited by Inaba & Cohen (1993), Solowig, et al. (1992), and Rogers (1993), the rapid increase in rave clubs confirms that Ecstasy use will not soon disappear. To assist educators in reaching the crowd at clubs and raves, non-drug using "ravers" should be promoted and included in the development of school and public health education campaigns. This practice will allow education to occur in specific health education settings and in raves themselves. The inclusion of Ecstasy and other "club" drug education in pop culture can assist educators in their attempt to decrease, if not stop, the use of Ecstasy.

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Eta Sigma Gamma Student Monograph
1984-1998

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Publication Frequency by Institution and Year
1984-1998

Institution	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	Total
Adelphi University		1		1												2
Ball State University					1								1		1	3
Illinois State University													1			1
Indiana State University	1															1
Indiana University		2	1	2	1	2	1	2		1		2	2	1	3	20
James Madison University	1	1	1													3
Kent University														1		1
Louisiana State University					1											1
Pennsylvania State University				2		1	1	2				1				7
Portland State University		1														1
San Diego State University													1			1
Southern Illinois University	2	1	3	2	2	2		1	1	1	3	2		1	1	22
Texas A&M University	1								1	1	2	1	2			8
Texas Women's University			1					1					1			3
Truman State University														2	1	3
Springfield College														1		1
University of Alabama-Birmingham									2							2
University of Arkansas						1										1
University of Central Arkansas									2							2
University of Florida					1	1	3	4	3	4	5	4	3	2	4	34
University of Georgia										1						1
University of Illinois	1															1
University of North Carolina-Greensboro			1													1
University of Tennessee	1		1	1			1			1						5
University of Toledo		1														1
TOTAL	**7**	**7**	**7**	**8**	**7**	**7**	**6**	**10**	**9**	**9**	**10**	**10**	**11**	**8**	**10**	**126**

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